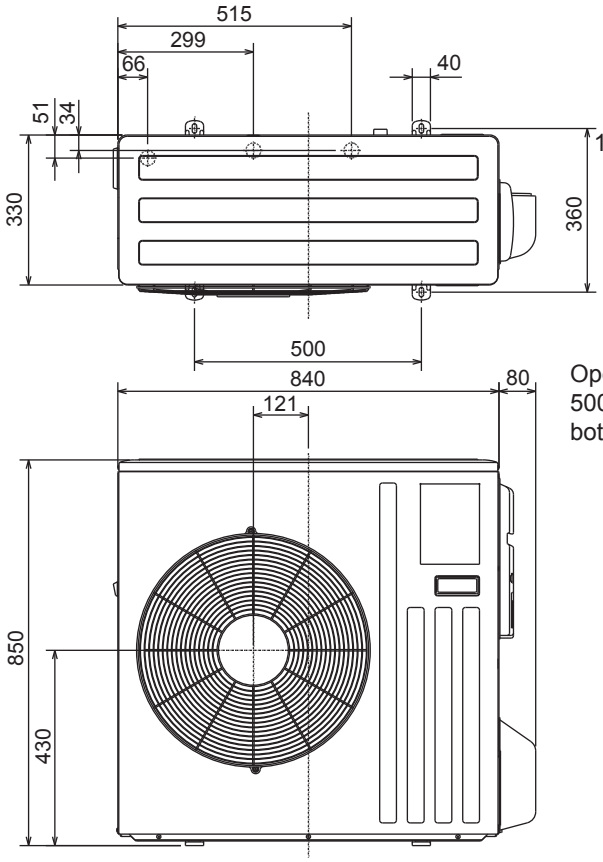
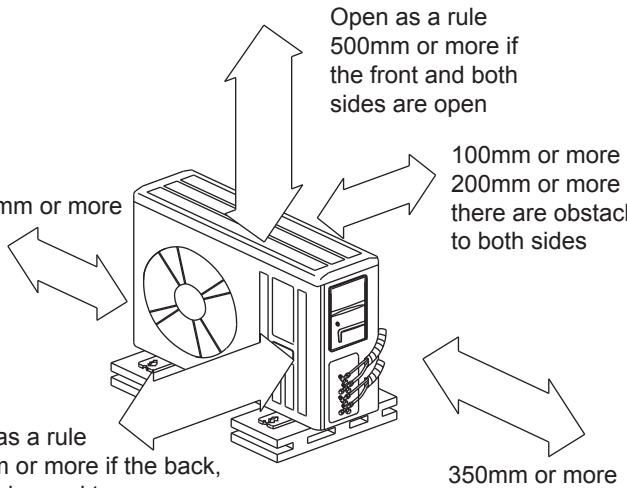
SUZ-KA50VA
SUZ-KA60VA
SUZ-KA71VA

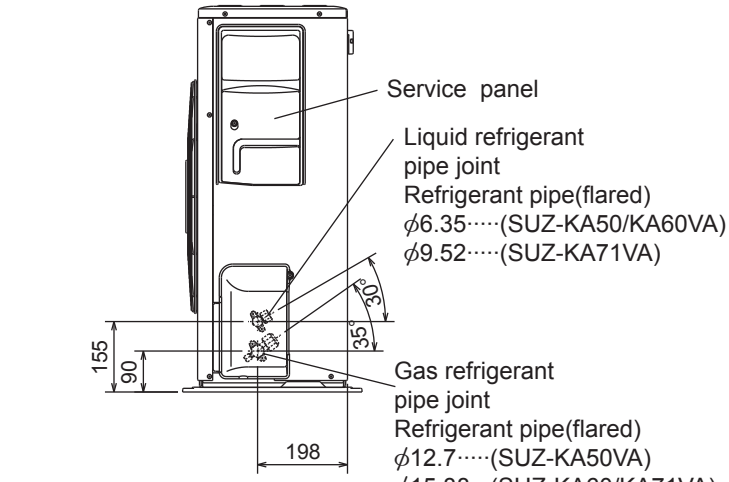
Unit: mm

OUTDOOR UNIT



REQUIRED SPACE

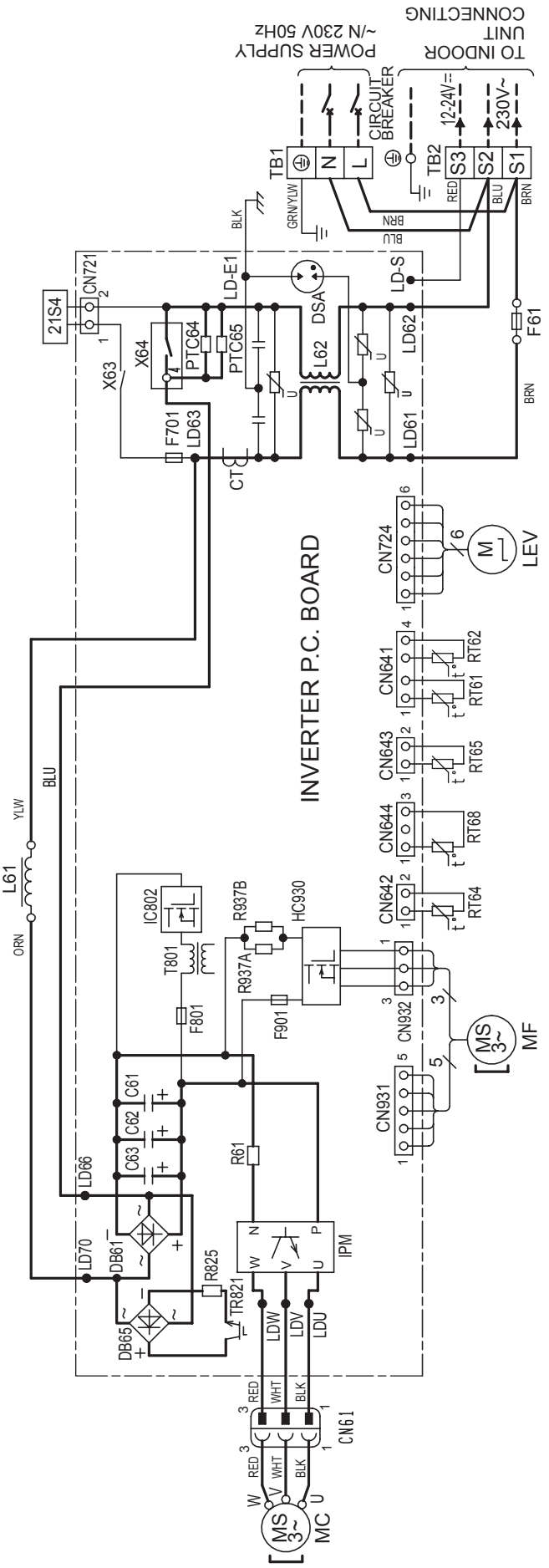




SUZ-KA50VA

OUTDOOR UNIT

MODELS WIRING DIAGRAM

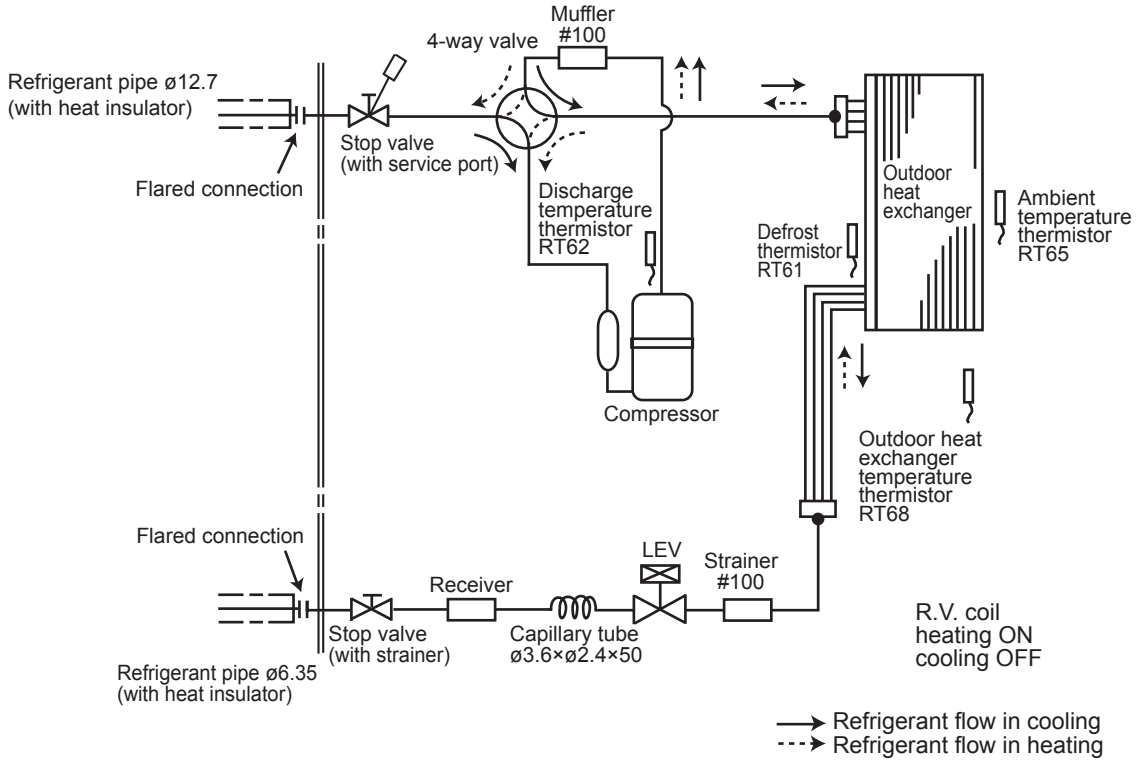


SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CT	CURRENT TRANSFORMER	LEV	EXPANSION VALVE COIL	R61	CURRENT-DETECTING RESISTOR
C61,62,63	SMOOTHING CAPACITOR	MC	COMPRESSOR	R825	CURRENT-DETECTING RESISTOR
DB61,DB65	DIODE MODULE	MF	FAN MOTOR	R937A, B	CURRENT-DETECTING RESISTOR
DSA	SURGE ABSORBER	PTC64,PTC65	CIRCUIT PROTECTION	TB1,TB52	TERMINAL BLOCK
F61	FUSE (T20AL 250V)	RT61	DEFROST THERMISTOR	TR821	SWITCHING POWER TRANSISTOR
F701,F801,F901	FUSE (T3.15AL 250V)	RT62	DISCHARGE TEMP. THERMISTOR	T801	TRANSFORMER
HC930,IPM	INTELLIGENT POWER MODULE	RT64	FIN TEMP. THERMISTOR	X63,X64	RELAY
IC802	INTELLIGENT POWER DEVICE	RT65	AMBIENT TEMP. THERMISTOR	21S4	REVERSING VALVE COIL
L61	REACTOR	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR		
L62	REACTOR				

NOTES: 1. About the indoor side electric wiring, refer to the indoor unit electric wiring diagram for servicing.
2. Use copper conductors only (for field wiring).
3. Symbols below indicate.
□□□ : Terminal block

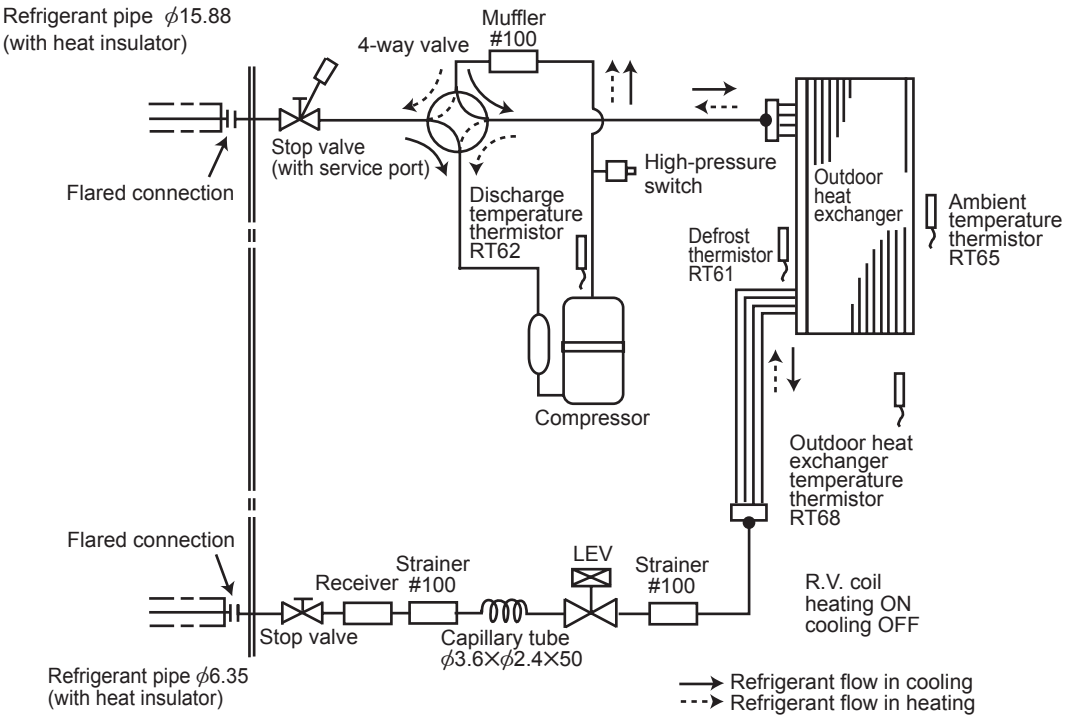
SUZ-KA50VA
OUTDOOR UNIT

Unit: mm



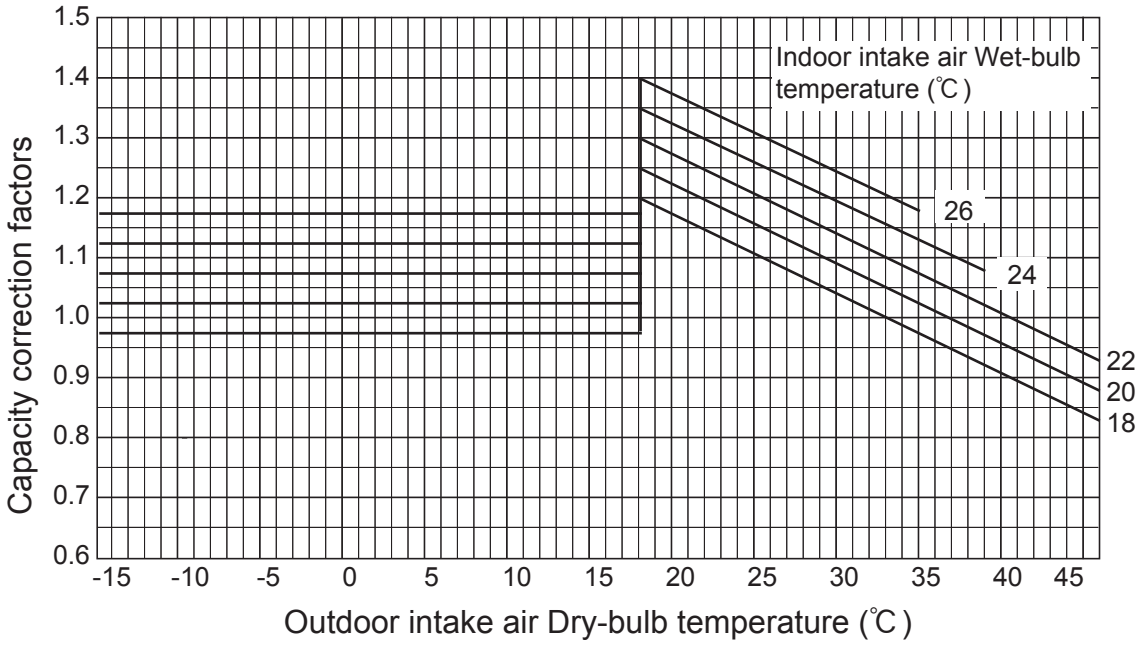
SUZ-KA60VA
OUTDOOR UNIT

Unit: mm

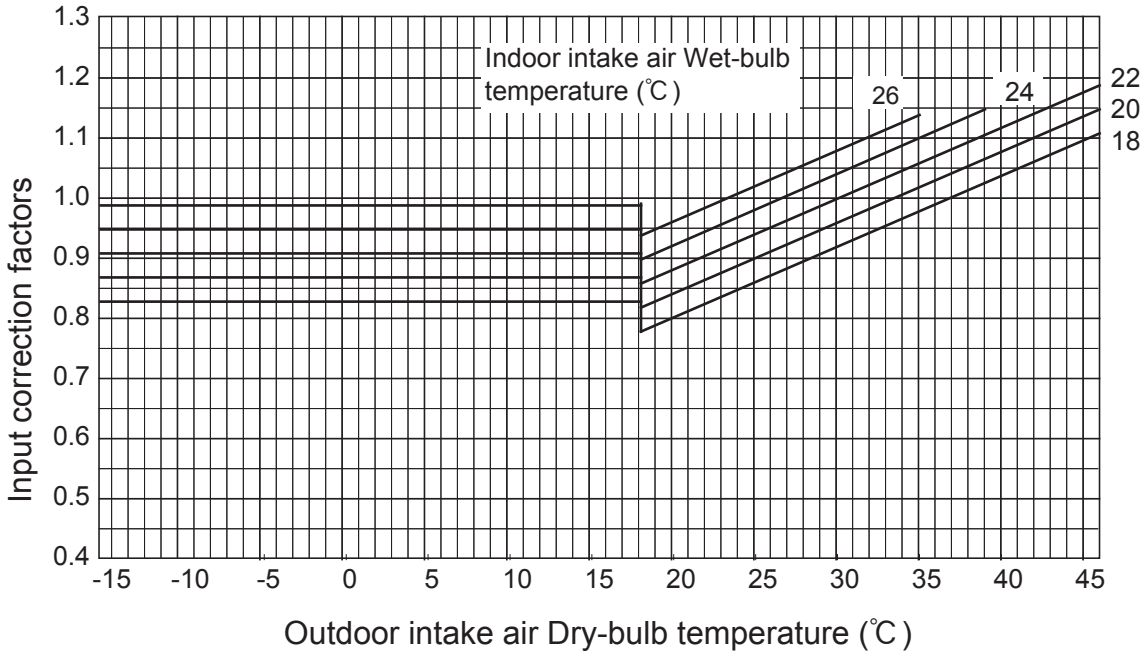


FOR THE COMBINATION OF OUTDOOR UNIT SUZ-KA50/60/71VA

Cooling capacity



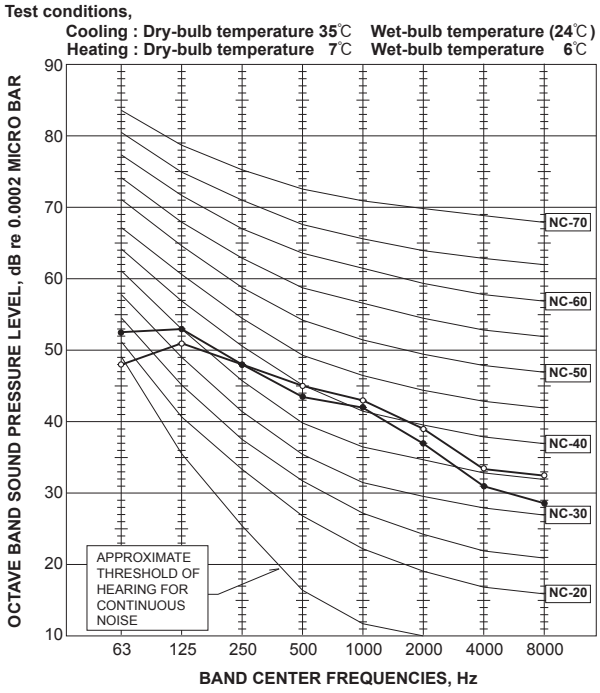
Total input (cooling)



B.3.5 NOISE CRITERIA CURVES

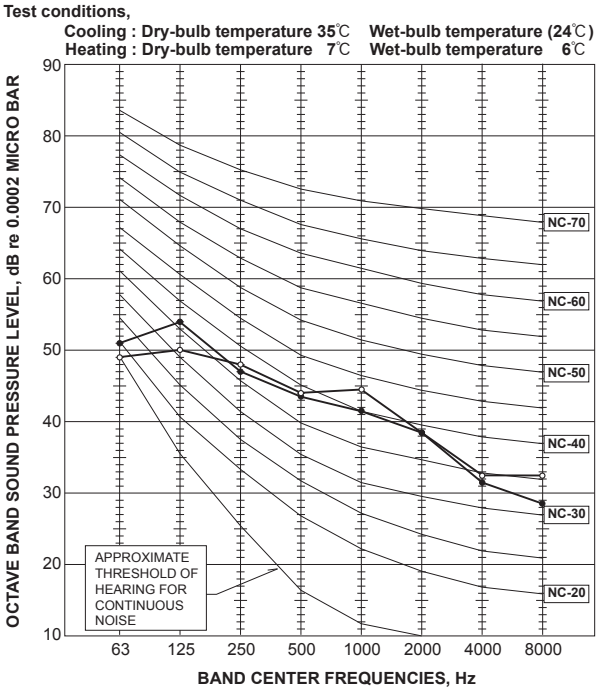
SUZ-KA25VA

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High Med.	COOLING	46	●—●
	HEATING	46	○—○



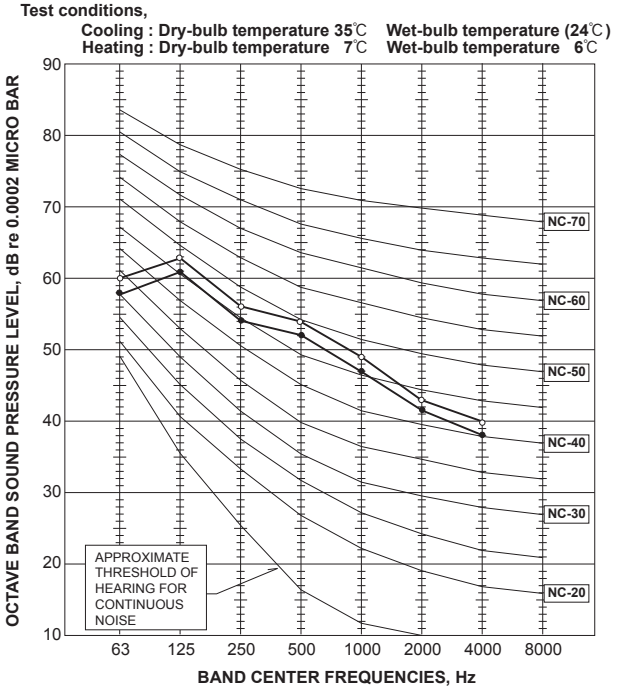
SUZ-KA35VA

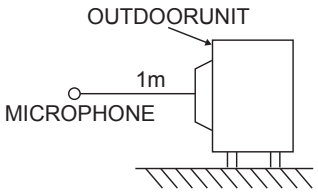
FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High Med.	COOLING	47	●—●
	HEATING	48	○—○



SUZ-KA50VA
SUZ-KA60VA
SUZ-KA71VA

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	COOLING	53	●—●
	HEATING	55	○—○



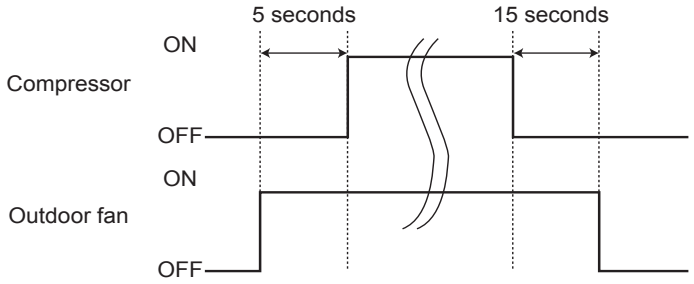


B.3.6 ACTUATOR CONTROL

SUZ-KA25VA SUZ-KA35VA SUZ-KA50VA SUZ-KA60VA SUZ-KA71VA

1. Outdoor fan motor control

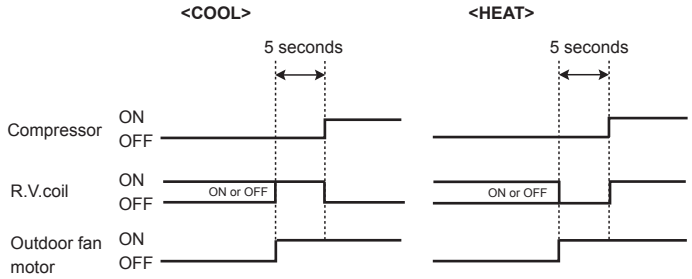
The fan motor turns ON/OFF, interlocking with the compressor.
[ON] The fan motor turns ON 5 seconds before the compressor starts up.
[OFF] The fan motor turns OFF 15 seconds after the compressor has stopped running.



2. R.V. coil control

Heating····· ON
Cooling····· OFF
Dry ····· OFF

NOTE: The 4-way valve reverses for 5 seconds right before start-up of the compressor.



3. Relation between main sensor and actuator

SUZ-KA25VA SUZ-KA35VA

Sensor	Purpose	Actuator					
		Compressor	LEV	Outdoor fan motor	RV-coil	Indoor fan motor	Defrost heater
Discharge temperature thermistor	Protection	○	○				
Indoor pipe temperature thermistor	Cooling: Coil frost prevention	○					
	Heating: High pressure protection	○	○				
Defrost thermistor	Cooling: High pressure protection	○	○				
	Heating: Defrosting	○	○	○	○	○	
Fin temperature thermistor	Protection	○		○			
Ambient temperature thermistor	Cooling: Low ambient temperature operation	○	○	○			
	Heating:Defrosting (Heater)						○

SUZ-KA50VA SUZ-KA60VA SUZ-KA71VA

Sensor	Purpose	Actuator			
		Compressor	LEV	Outdoor fan motor	4-way valve
Discharge temperature thermistor	Protection	○	○		
Indoor pipe temperature thermistor	Cooling: Coil frost prevention	○			
	Heating: High pressure protection	○	○		
Defrost thermistor	Heating: Defrosting	○	○	○	○
Fin temperature thermistor	Protection	○		○	
Ambient temperature thermistor	Protection	○	○	○	
Outdoor heat exchanger temperature	Cooling: High pressure protection	○	○	○	

B.3.7 TROUBLESHOOTING

SUZ-KA25VA SUZ-KA35VA
SUZ-KA50VA SUZ-KA60VA SUZ-KA71VA

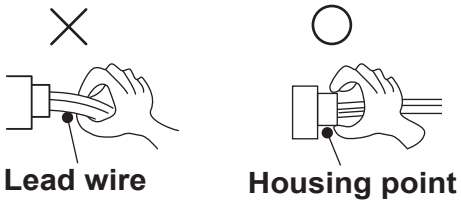
1. Cautions on troubleshooting

1-1. Before troubleshooting, check the following:

1) Check the power supply voltage.
2) Check if the indoor/outdoor connecting wire is correct.

1-2. Take care the following during servicing.

1) Before servicing the air conditioner, be sure to turn OFF the main unit first with the remote controller, and turn off the breaker.
2) Be sure to turn OFF the power supply before removing the front panel, the cabinet, the top panel, and the electronic control P.C. board.
3) When removing the electrical parts, be careful to the residual voltage of smoothing capacitor.
4) When removing the electronic control P.C. board, hold the edge of the board with care NOT to apply stress on the components.
5) When connecting or disconnecting the connectors, hold the housing of the connector. DO NOT pull the lead wires.



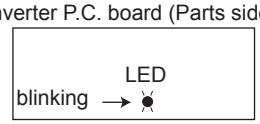
1-3. Troubleshooting procedure

1) First, check if the OPERATION INDICATOR lamp is blinking on and off to indicate an abnormality. To make sure, check how many times the abnormality indication is blinking on and off before starting service work.
2) Before servicing, check that the connector and terminal are connected properly.
3) If the electronic control P.C. board is supposed to be defective, check the copper foil pattern for disconnection and the components for bursting and discoloration.
4) When troubleshooting, refer to “2.Failure model recall function”.

2-4. Outdoor unit failure mode table

SUZ-KA25VA SUZ-KA35VA SUZ-KA50VA

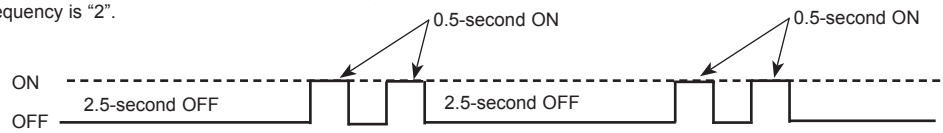
Inverter P.C. board (Parts side)



NOTE 1. The location of LED is illustrated at the right figure.
2. LED lights up during normal operation.

LED indication (Outdoor P.C. board)	Abnormal point (Failure mode/protection)	Condition	Correspondence
—	None (Normal)	—	—
—	Outdoor power system	Overcurrent protection stop is continuously performed 3 times within 1 minute after the compressor gets started.	•Reconnect connectors. •Check stop valve.
1-time flash every 2.5 seconds	Discharge temperature thermistor	Thermistor shorts or opens during compressor running.	•Defective outdoor thermistors can be identified by checking the blinking pattern of LED.
	Defrost thermistor		
3-time flash 2.5 seconds OFF	Fin temperature thermistor		
4-time flash 2.5 seconds OFF	P.C. board temperature thermistor		
2-time flash 2.5 seconds OFF	Ambient temperature thermistor		
11-time flash 2.5 seconds OFF	Overcurrent	Large current flows into intelligent power module.	•Reconnect compressor connector. •Check stop valve.
12-time flash 2.5 seconds OFF	Compressor synchronous abnormality (Compressor start-up failure protection)	Waveform of compressor current is distorted.	•Reconnect compressor connector.
—	Discharge temperature	Temperature of discharge temperature thermistor exceeds 116°C, compressor stops. Compressor can restart if discharge temperature thermistor reads 100°C or less 3 minutes later.	•Check refrigerant circuit and refrigerant amount.
—	High pressure	Temperature indoor coil thermistor exceeds 70°C in HEAT mode. Temperature defrost thermistor exceeds 70°C in COOL mode.	•Check refrigerant circuit and refrigerant amount. •Check stop valve.
7-time flash 2.5 seconds OFF	Fin temperature/P.C. board temperature	Temperature of fin temperature thermistor on the inverter P.C. board exceeds 75 ~ 80°C, or temperature of P.C. board temperature thermistor on the inverter P.C. board exceeds 70 ~ 75°C.	•Check around outdoor unit. •Check outdoor unit air passage.
—	Outdoor fan motor	Outdoor fan has stopped 3 times in a row within 30 seconds after outdoor fan start-up.	•Check of outdoor fan motor. •Check of inverter P.C. board.
5-time flash 2.5 seconds OFF	Nonvolatile memory data	Nonvolatile memory data cannot be read properly.	•Replace the inverter P.C. board.
—	Discharge temperature	Temperature of discharge temperature thermistor has been 50°C or less for 20 minutes.	•Check of LEV. •Check refrigerant circuit and refrigerant amount.
8-time flash 2.5 seconds OFF	DC voltage	DC voltage of inverter cannot be detected normally.	•Check inverter. •Check compressor.
9-time flash 2.5 seconds OFF	Each phase current of compressor	Each phase current of compressor cannot be detected normally.	
10-time flash 2.5 seconds OFF	Overcurrent Compressor open-phase	Large current flows into intelligent power module (IPM). The open-phase operation of compressor is detected. The interphase short out occurs in the output of the intelligent power module (IPM). The compressor winding shorts out.	•Reconnect compressor connector.
14-time flash 2.5 seconds OFF	Stop valve (Closed valve)	Closed valve is detected by compressor current.	•Check stop valve

The blinking frequency shows the number of times the LED blinks after every 2.5-second OFF.
(Example) When the blinking frequency is "2".



Earthquake-proof strength analysis <Anchor bolt>

1.Type: S Series Inverter Outdoor unit

2.Model name: SUZ-KA50VA, SUZ-KA60VA

3.Specification

(1) Unit mass W= 53 kg

(2) Anchor bolt

1.The total number of bolts. N= 4

2.The size and shape. "=M 10 type

3.The axis section area per one bolt. A= 78 mm^2= 78×10^{-6} m^2

4.The total number of bolts in one side which be pulled stronger when the unit inverted. Nt= 2

(3) The height between the installing surface and the center of gravity of the unit Hg= 340 mm= 0.340 m

(4) The bolt-span from the examination angle L= 360 mm= 0.360 m

(5) The distance between the center of bolt and the center of gravity of the unit Lg= 165 mm(Lg≦L/2)= 0.165 m

4.The examination calculation (by rounding off to the first decimal place of each item)

(1) The horizontal seismic coeffcient for designing Kh= 1.0

(2) The vertical seismic coefficient for designing Kv=Kh/2= 0.5

(3) The horizontal earthquake forces for designing Fh=Kh·W·9.8= 519.4 N

(4) The vertical earthquake forces for designing Fv=Kv·W·9.8= 259.7 N

(5) The withdrawal strength of the anchor bolt $Rb=\frac{Fh\cdot Hg-(W\cdot 9.8-Fv)\cdot Lg}{L\cdot Nt}$ = 185.8 N

(6) The shear forces of the anchor bolt Q=Fh/N= 129.9 N

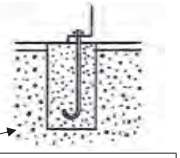
(7) The stress arising to the anchor bolt

1.The tensile stress. σ=Rb/A= 2.4 MPa < ft = 176.4 MPa

2.The shearing stress. τ=Q/A= 1.7 MPa < fs = 132.3 MPa

3.The stress when affected by both the shearing and the tensile at the same time. fts=1.4ft-1.6 τ = 244.2 MPa

σ= 2.4 MPa < fts= 244.2 MPa



(8) The construction way of the anchor bolt

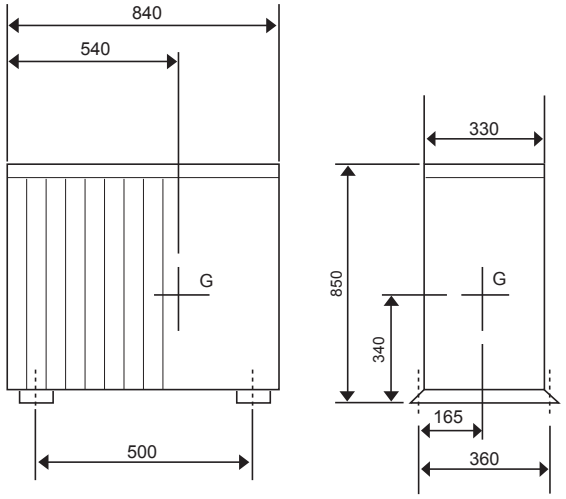
1.The construction way of the anchor bolt. = Boxed J type anchor

2.The thickness of the concrete. = 120 mm = 0.120 m

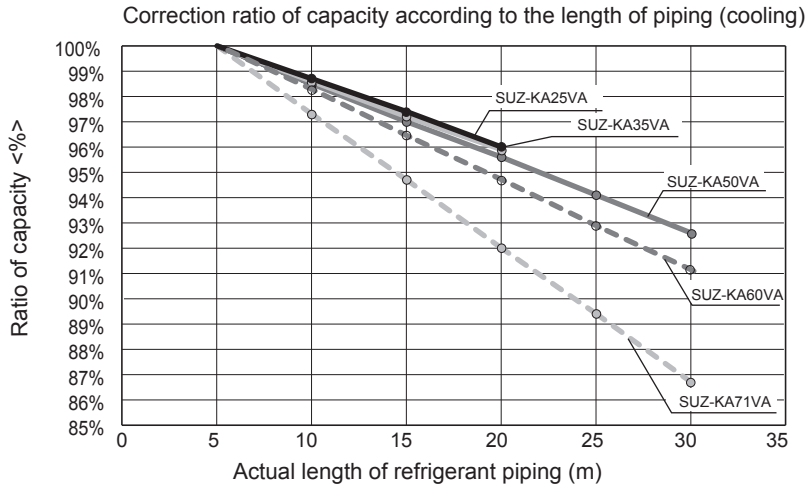
3.The length of buried part of bolt. = 70 mm = 0.070 m

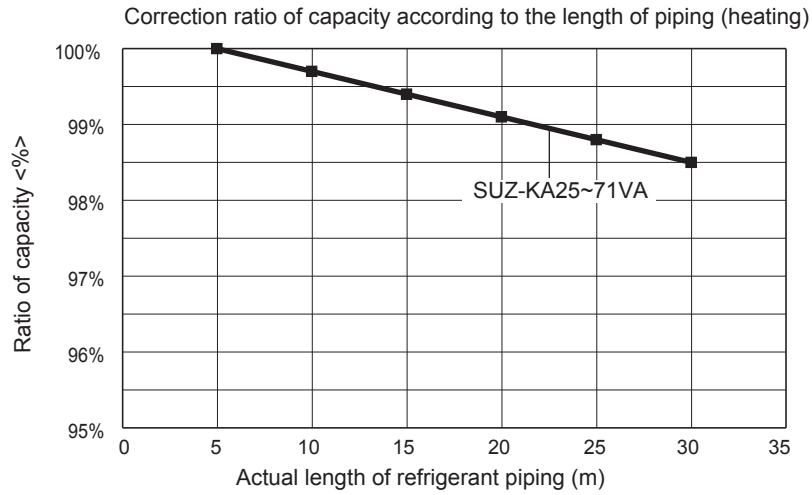
4.The permissible withdrawal weight. Ta= 3136 N > Rb= 186 N

Since the results from the examination above, the anchor bolt has enough strength



B.3.9 CAPACITY CORRECTION RATIO CURVE PIPING LENGTH



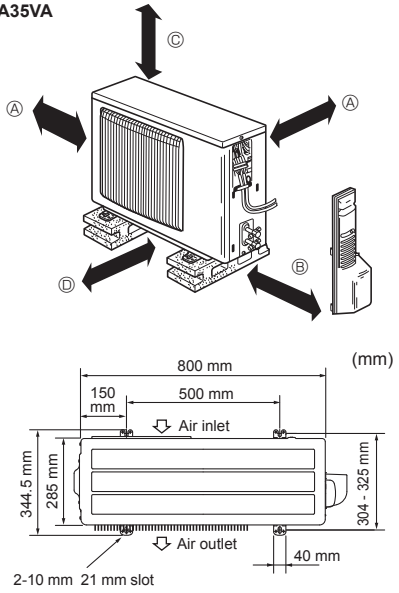


The length intended for the capacity calculation, which counts the length of refrigerant piping and the number of bends, is called actual length.

Length of refrigerant piping (m) + (Number of bends × 0.3 m) = Actual length of refrigerant piping (m)

3. Installation diagram

■ **SUZ-KA25/KA35VA**



■ **SUZ-KA50/KA60/KA71VA**

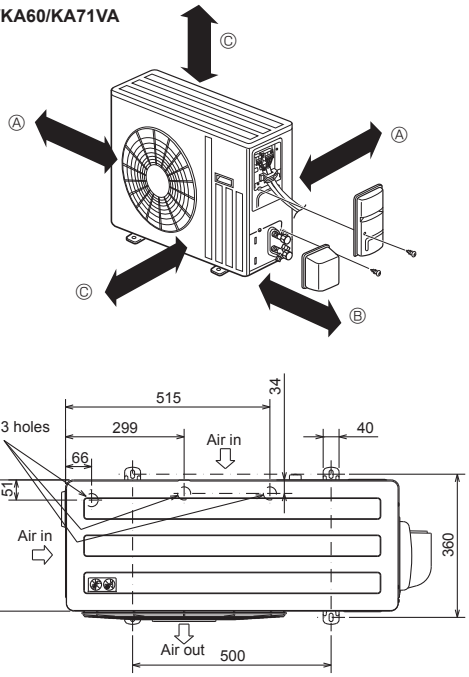


Fig. 3-1

3.1. Outdoor unit (Fig. 3-1)

Ventilation and service space

SUZ-KA25/KA35VA

Ⓐ 100 mm or more
Ⓑ 350 mm or more
Ⓒ Basically open 100 mm or more without any obstruction in front and on both sides of the unit.
Ⓓ 200 mm or more (Open two sides of left, right, or rear side.)

SUZ-KA50/KA60/KA71VA

Ⓐ 100 mm or more
Ⓑ 350 mm or more
Ⓒ 500 mm or more

When the piping is to be attached to a wall containing metals (tin plated) or metal netting, use a chemically treated wooden piece 20 mm or thicker between the wall and the piping or wrap 7 to 8 turns of insulation vinyl tape around the piping.

Units should be installed by licensed contractor accordingly to local code requirement.

Note:
When operating the air conditioner in low outside temperature, be sure to follow the instructions described below.

- Never install the outdoor unit in a place where its air inlet/outlet side may be exposed directly to wind.
- To prevent exposure to wind, install the outdoor unit with its air inlet side facing the wall.
- To prevent exposure to wind, it is recommended to install a baffle board on the air outlet side of the outdoor unit.

4. Drain piping for outdoor unit (Fig. 4-1)

■ **SUZ-KA25/35VA**

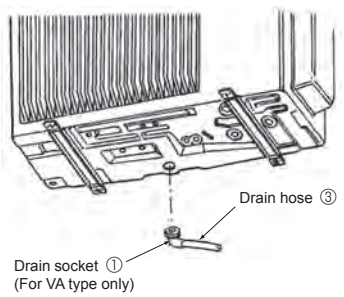


Fig. 4-1

4.1. Accessories

Check the following parts before installation.

<Outdoor unit>

①	Drain socket (for VA type only)	1
③	Drain cap ϕ33 (for SUZ-KA50/KA60/KA71 only)	2

- Provide drain piping before indoor and outdoor piping connection. (It will be hard to install drain socket ① if indoor and outdoor piping connection is conducted prior to drain piping as outdoor unit becomes immovable.)
- Connect the drain hose ③ (obtainable at a store, inside diameter: 15 mm) as shown in the figure for drainage.
- Make sure to provide drain piping with a downhill grade for easy drain flow.

Note:
Do not use the drain socket ① in the cold region. Drain may freeze and it makes the fan stop.

5. Refrigerant piping work

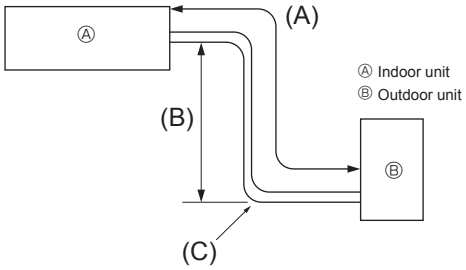


Fig. 5-1

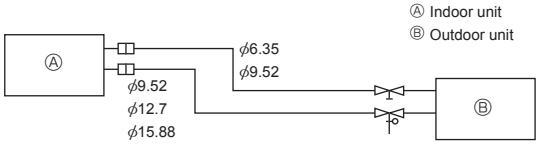
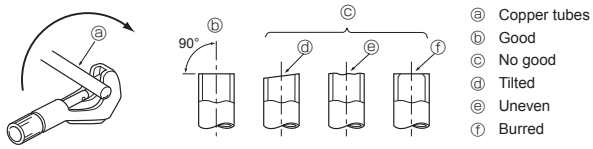
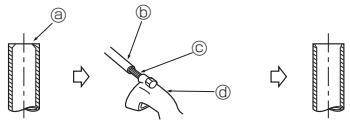


Fig. 5-2



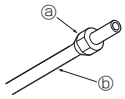
ⓐ Copper tubes
ⓑ Good
ⓒ No good
ⓓ Tilted
ⓔ Uneven
ⓕ Burred

Fig. 5-3



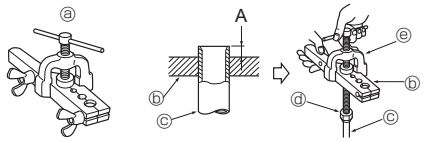
ⓐ Burr
ⓑ Copper tube/pipe
ⓒ Spare reamer
ⓓ Pipe cutter

Fig. 5-4



ⓐ Flare nut
ⓑ Copper tube

Fig. 5-5



ⓐ Flaring tool
ⓑ Die
ⓒ Copper tube
ⓓ Flare nut
ⓔ Yoke

Fig. 5-6

5.1. Refrigerant pipe (Fig. 5-1)

▶ **Check that the difference between the heights of the indoor and outdoor units, the length of refrigerant pipe, and the number of bends in the pipe are within the limits shown below.**

Models	(A) Pipe length (one way)	(B) Height difference	(C) Number of bends (one way)
SUZ-KA25/KA35	max. 20 m	max. 12 m	max. of 10
SUZ-KA50/KA60/KA71	max. 30 m	max. 30 m	max. of 10

- Height difference limitations are binding regardless of which unit, indoor or outdoor, is positioned higher.
- Refrigerant adjustment ... If pipe length exceeds 7 m, additional refrigerant (R410A) charge is required.
  (The outdoor unit is charged with refrigerant for pipe length up to 7 m.)

Pipe length	Up to 7 m	No additional charge is required.
	Exceeding 7 m	Additional charge is required. (Refer to the table below.)
Refrigerant to be added	SUZ-KA25/KA35 type	30 g × (refrigerant piping length (m) -5)
	SUZ-KA50/KA60 type	20 g × (refrigerant piping length (m) -7)
	SUZ-KA71 type	55 g × (refrigerant piping length (m) -7)

Piping preparation

- Refrigerant pipes of 3, 5, 7, 10 and 15 m are available as optional items.

(1) Table below shows the specifications of pipes commercially available.

Model	Pipe	Outside diameter		Min. wall thickness	Insulation thickness	Insulation material
		mm	inch			
SUZ-KA25	For liquid	6.35	1/4	0.8 mm	8 mm	Heat resisting foam plastic 0.045 specific gravity
	For gas	9.52	3/8	0.8 mm	8 mm	
SUZ-KA35	For liquid	6.35	1/4	0.8 mm	8 mm	
	For gas	9.52	3/8	0.8 mm	8 mm	
SUZ-KA50	For liquid	6.35	1/4	0.8 mm	8 mm	
	For gas	12.7	1/2	0.8 mm	8 mm	
SUZ-KA60	For liquid	6.35	1/4	0.8 mm	8 mm	
	For gas	15.88	5/8	0.8 mm	8 mm	
SUZ-KA71	For liquid	9.52	3/8	0.8 mm	8 mm	
	For gas	15.88	5/8	1.0 mm	8 mm	

(2) Ensure that the 2 refrigerant pipes are well insulated to prevent condensation.
(3) Refrigerant pipe bending radius must be 100 mm or more.

⚠ **Caution:**
Using careful insulation of specified thickness. Excessive thickness prevents storage behind the indoor unit and smaller thickness causes dew drippage.

5.2. Flaring work

- Main cause of gas leakage is defect in flaring work.
  Carry out correct flaring work in the following procedure.

5.2.1. Pipe cutting (Fig. 5-3)

- Using a pipe cutter cut the copper tube correctly.

5.2.2. Burrs removal (Fig. 5-4)

- Completely remove all burrs from the cut cross section of pipe/tube.
- Put the end of the copper tube/pipe to downward direction as you remove burrs in order to avoid burrs drop in the tubing.

5.2.3. Putting nut on (Fig. 5-5)

- Remove flare nuts attached to indoor and outdoor unit, then put them on pipe/tube having completed burr removal.
  (not possible to put them on after flaring work)

5.2.4. Flaring work (Fig. 5-6)

- Carry out flaring work using flaring tool as shown at the right.

Pipe diameter (mm)	Dimension	
	A (mm)	$B^{+0}_{-0.4}$ (mm)
	When the tool for R410A is used	
	Clutch type	
6.35	0 - 0.5	9.1
9.52	0 - 0.5	13.2
12.7	0 - 0.5	16.6
15.88	0 - 0.5	19.7

Firmly hold copper tube in a die in the dimension shown in the table at above.

6. Electrical work

6.1. Outdoor unit (Fig. 6-1, Fig. 6-2, Fig. 6-3, Fig. 6-4)

① Remove the service panel.
② Wire the cables referring to the Fig. 6-1, Fig. 6-2, Fig. 6-3 and the Fig. 6-4.

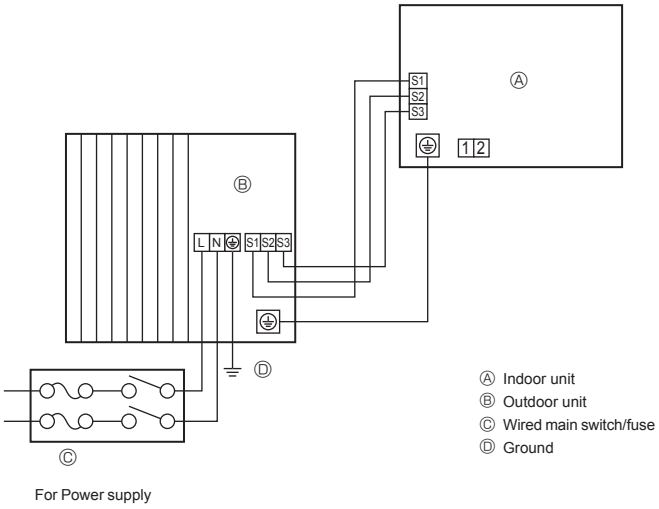


Fig. 6-1

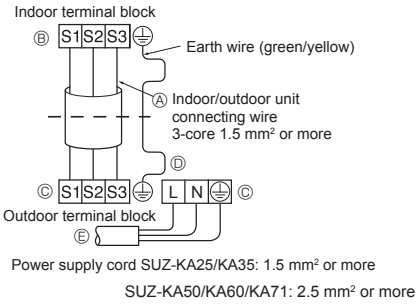

Indoor terminal block
Ⓑ S1 S2 S3
Earth wire (green/yellow)
Ⓐ Indoor/outdoor unit connecting wire 3-core 1.5 mm² or more
Ⓓ
Ⓒ S1 S2 S3 L N Ⓒ
Outdoor terminal block
Ⓔ
Power supply cord SUZ-KA25/KA35: 1.5 mm² or more
SUZ-KA50/KA60/KA71: 2.5 mm² or more

Fig. 6-2

- Perform wiring as shown in the diagram to the lower left. (Procure the cable locally) (Fig. 6-2)
  Make sure to use cables of the correct polarity only.
  Ⓐ Connecting cable
  Ⓑ Indoor terminal block
  Ⓒ Outdoor terminal block
  Ⓓ Always install an earth wire longer than other cables.
  Ⓔ Power supply cord

⚠ Caution:
- **Be careful to make wiring properly.**
- **Firmly tighten the terminal screws to prevent then from loosening.**
- **After tightening, pull the wires lightly to confirm that they do not move.**

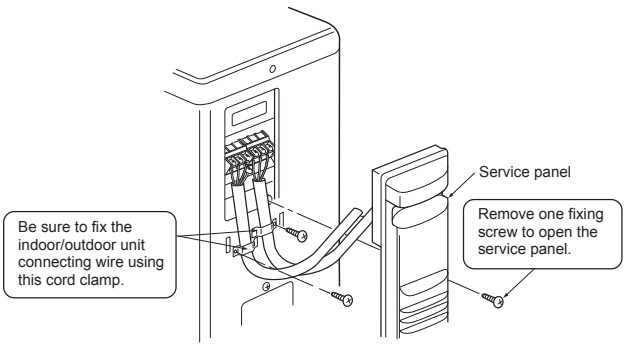

Service panel
Remove one fixing screw to open the service panel.
Be sure to fix the indoor/outdoor unit connecting wire using this cord clamp.

Fig. 6-3

- Connect cable from the indoor unit correctly on the terminal-block.
- Use the same terminal block and polarity as is used with the indoor unit.
- For aftercare maintenance, give extra length to connecting cable.

> - Both end of connecting cable (extension wire) are to be peeled off.
> When too long, or connected by cutting off the middle, peel off power supply cable to the size given in the figure.
> - Be careful not to contact connecting cable with piping.

⚠ Caution:
- **Be careful to make wiring properly. (Fig. 6-4)**
- **Firmly tighten the terminal screws to prevent them from loosening.**
- **After tightening, pull the wires lightly to confirm that they do not move.**

⚠ Warning:
- **Be sure to attach the service panel of the outdoor unit securely. If it is not attached correctly, it could result in a fire or an electric shock due to dust, water, etc.**
- **Tighten terminal screws securely.**
- **Wiring should be done so that the power lines are not subject to tension. Otherwise, heat may be generated or fire may occur.**

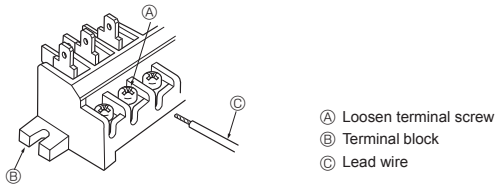


Fig. 6-4

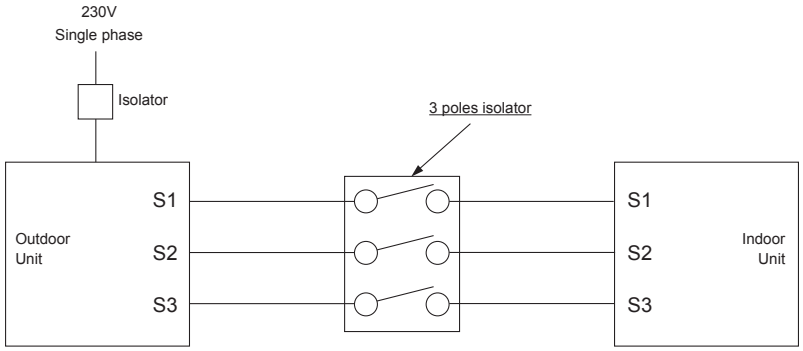
6. Electrical work

6.2. Field electrical wiring

Outdoor unit model			SUZ-KA25/KA35	SUZ-KA50/KA60/KA71
Outdoor unit power supply			~/N (single), 50 Hz, 230 V	~/N (single), 50 Hz, 230 V
Outdoor unit input capacity Main switch (Breaker)		*1	10 A	20 A
Wiring Wire No.× size (mm²)	Outdoor unit power supply		2 × Min. 1.5	2 × Min. 2.5
	Outdoor unit power supply earth		1 × Min. 1.5	1 × Min. 2.5
	Indoor unit-Outdoor unit		3 × 1.5 (Polar)	3 ×1.5 (Polar)
	Indoor unit-Outdoor unit earth		1 × Min. 1.5	1 ×Min. 1.5
Circuit rating	Outdoor unit L-N	*2	AC 230 V	AC 230 V
	Indoor unit-Outdoor unit S1-S2	*2	AC 230 V	AC 230 V
	Indoor unit-Outdoor unit S2-S3	*2	DC 12 V ~ DC 24 V	DC 12 V ~ DC 24 V

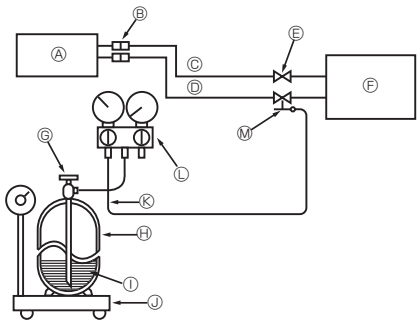
*1. A breaker with at least 3 mm contact separation in each poles shall be provided. Use earth leakage breaker (NV).
*2. The figures are NOT always against the ground.
S3 terminal has DC 24 V against S2 terminal. However between S3 and S1, these terminals are NOT electrically insulated by the transformer or other device.

Notes: 1. Wiring size must comply with the applicable local and national code.
2. Power supply cords and Indoor/Outdoor unit connecting cords shall not be lighter than polychloroprene sheathed flexible cord. (Design 60245 IEC 57)
3. Install an earth longer than other cables.



⚠ **Warning:**
There is high voltage potential on the S3 terminal caused by electrical circuit design that has no electrical insulation between power line and communication signal line. Therefore, please turn off the main power supply when servicing. And do not touch the S1, S2, S3 terminals when the power is energized. If isolator should be used between indoor unit and outdoor unit, please use 3-pole type.

7. Maintenance



Ⓐ Indoor unit
Ⓑ Union
Ⓒ Liquid pipe
Ⓓ Gas pipe
Ⓔ Stop valve
Ⓕ Outdoor unit
Ⓖ Refrigerant gas cylinder operating valve
Ⓗ Refrigerant gas cylinder for R410A with siphon
Ⓘ Refrigerant (liquid)
Ⓙ Electronic scale for refrigerant charging
Ⓚ Charge hose (for R410A)
Ⓛ Gauge manifold valve (for R410A)
Ⓜ Service port

Fig. 7-1

7.1. Gas charge (Fig. 7-1)

1. Connect gas cylinder to the service port of stop valve (3-way).
2. Execute air purge of the pipe (or hose) coming from refrigerant gas cylinder.
3. Replenish specified amount of refrigerant, while running the air conditioner for cooling.

Note:
In case of adding refrigerant, comply with the quantity specified for the refrigerating cycle.

⚠ **Caution:**
- **Do not discharge the refrigerant into the atmosphere.**
  Take care not to discharge refrigerant into the atmosphere during installation, reinstallation, or repairs to the refrigerant circuit.
- **For additional charging, charge the refrigerant from liquid phase of the gas cylinder.**
  If the refrigerant is charged from the gas phase, composition change may occur in the refrigerant inside the cylinder and the outdoor unit. In this case, ability of the refrigerant cycle decreases and normal operation can become impossible. However, charging the liquid refrigerant all at once may cause the compressor to be locked. Thus, charge the refrigerant slowly.

To maintain the high pressure of the gas cylinder, warm the gas cylinder with warm water (under 40℃) during cold season. But never use naked fire or steam.

M series Models

COMBINATION OF SINGLE SPILIT TYPE

Type			Model Name			
			Indoor unit		Outdoor unit	
Wall- Mounted	Fixed-Speed	Cooling only	MSC-GE20VB	E1	MU-GA20VB	E3
			MSC-GE25VB	E1	MU-GA25VB	E2
			MSC-GE35VB	E1	MU-GA35VB	E3
			MS-GE50VB	E1	MU-GE50VB	E1
			MS-GA60VB	E1	MU-GA60VB	E1
			MS-GD80VB	E1	MU-GD80VB	E1
		Heat pump	MSC-GE20VB	E1	MUH-GA20VB	E2
			MSC-GE25VB	E1	MUH-GA25VB	E3
			MSC-GE35VB	E1	MUH-GA35VB	E3
			MSH-GE50VB	E1	MUH-GE50VB	E1
			MSH-GA60VB	E1	MUH-GA60VB	E1
			MSH-GD80VB	E1	MUH-GD80VB	E1
	Inverter	Heat pump	MSZ-FD25VA	E2	MUZ-FD25VA	E1
					MUZ-FD25VABH	E1
			MSZ-FD25VAS	E2	MUZ-FD25VA	E1
					MUZ-FD25VABH	E1
			MSZ-FD35VA	E2	MUZ-FD35VA	E1
					MUZ-FD35VABH	E1
			MSZ-FD35VAS	E2	MUZ-FD35VA	E1
					MUZ-FD35VABH	E1
			MSZ-FD50VA	E2	MUZ-FD50VA	E1
					MUZ-FD50VABH	E1
			MSZ-FD50VAS	E2	MUZ-FD50VA	E1
					MUZ-FD50VABH	E1
			MSZ-GE22VA	E1	for MXZ connection only	
			MSZ-GE25VA	E1	MUZ-GE25VA	E1
					MUZ-GE25VAH	E1
			MSZ-GE35VA	E1	MUZ-GE35VA	E1
					MUZ-GE35VAH	E1
			MSZ-GE42VA	E1	MUZ-GE42VA	E1
					MUZ-GE42VAH	E1
			MSZ-GE50VA	E1	MUZ-GE50VA	E1
					MUZ-GE50VAH	E1
			MSZ-GE60VA	E1	MUZ-GE60VA	E1
			MSZ-GE71VA	E1	MUZ-GE71VA	E1
			MSZ-HC25VA	E1	MUZ-HC25VA	E1
			MSZ-HC35VA	E2	MUZ-HC35VA	E2
			MSZ-HC35VAB	E2	MUZ-HC35VAB	E2
			MSZ-SF15VA	E1	for MXZ connection only	
			MSZ-SF20VA	E1		
Floor-Standing	Inverter	Heat pump	MFZ-KA25VA	E4	SUZ-KA25VAR1	
					SUZ-KA25VAHR1	
			MFZ-KA35VA	E4	SUZ-KA35VAR1	
					SUZ-KA35VAHR1	
			MFZ-KA50VA	E4	SUZ-KA50VAR2	
Ceiling Cassette	Inverter	Heat pump	MLZ-KA25VA	E2	for MXZ connection only	
			MLZ-KA35V	E2	for MXZ connection only	
			MLZ-KA50VA	E2	for MXZ connection only	

C.2.1 SPECIFICATIONS

C.2.1.1 Inverter Heat Pump

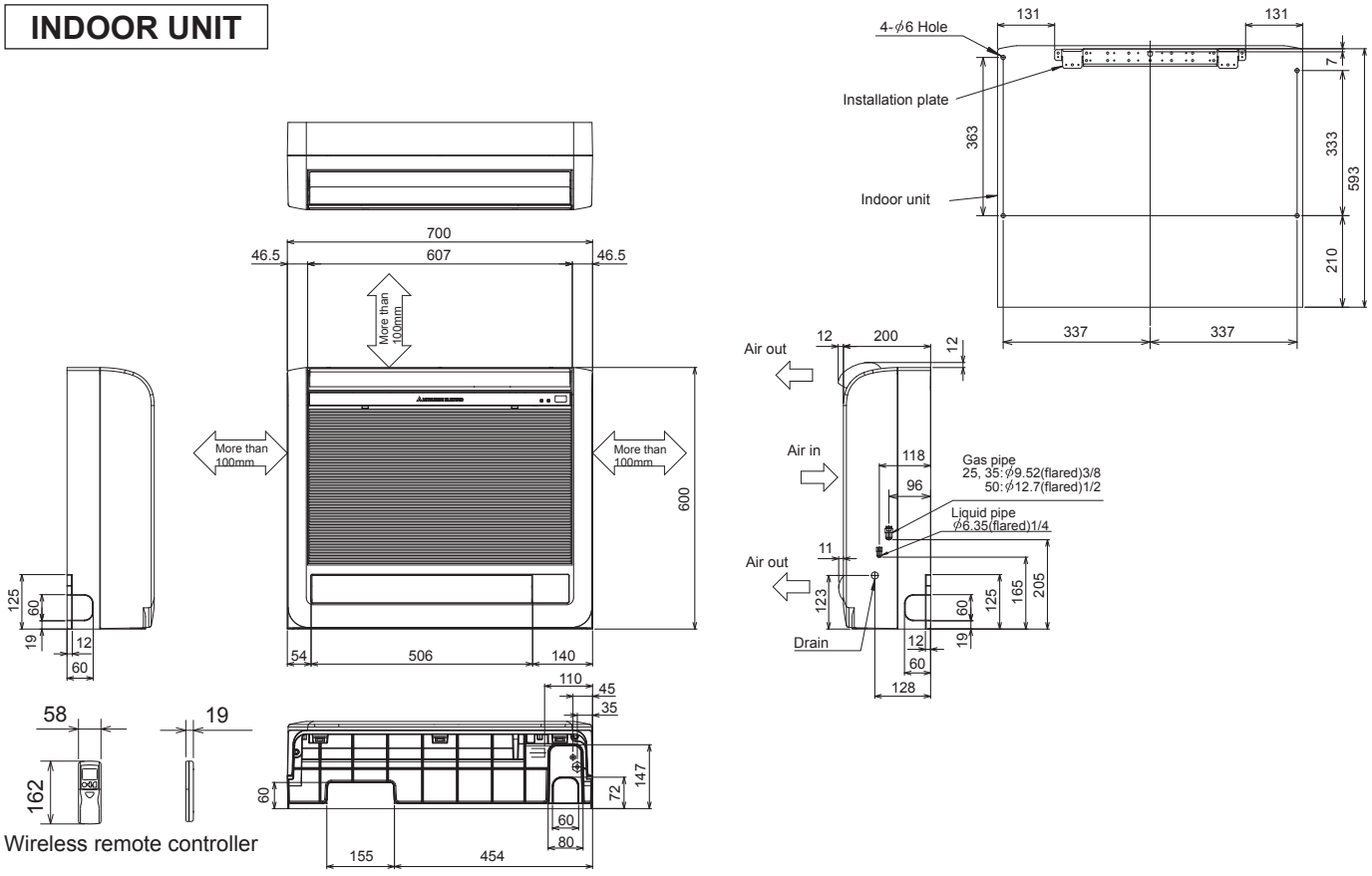
Model Name	Indoor Unit				MFZ-KA25VA-E4	MFZ-KA25VA-E4	MFZ-KA35VA-E4	MFZ-KA35VA-E4	MFZ-KA50VA-E4
	Outdoor Unit				SUZ-KA25VAR1	SUZ-KA25VAHR1	SUZ-KA35VAR1	SUZ-KA35VAHR1	SUZ-KA50VAR2
Power Supply				Source	Outdoor power supply				
	Out			V	230	230	230	230	230
				Phase	Single	Single	Single	Single	Single
				Hz	50	50	50	50	50
Refrigerant					R410A	R410A	R410A	R410A	R410A
Cooling	Capacity	Rated		kW	2.5	2.5	3.5	3.5	4.8
		Max.		kW	3.4	3.4	3.9	3.9	5.4
		Min.		kW	0.9	0.9	0.9	0.9	0.9
	SHF				0.66	0.66	0.65	0.65	0.63
	Total Input	Rated		kW	0.58	0.58	1.09	1.09	1.55
	EER				4.31	4.31	3.21	3.21	3.10
		EEL RANK			A	A	A	A	B
	SPL	In	Low	dB(A)	22/22	22/22	23/23	23/23	32/32
		1Fan/2Fan	Mid	dB(A)	27/27	27/27	28/28	28/28	35/35
			Hi	dB(A)	32/32	32/32	33/33	33/33	39/39
			Super Hi	dB(A)	37/37	37/37	38/38	38/38	43/43
		Out	Rated	dB(A)	46	46	47	47	53
	Air Volume	In	Low	m^3/min.	3.7/4.8	3.7/4.8	3.8/5.0	3.8/5.0	5.1/7.1
		1Fan/2Fan	Mid	m^3/min.	4.3/5.8	4.3/5.8	4.6/6.1	4.6/6.1	5.6/7.9
			Hi	m^3/min.	5.2/7.1	5.2/7.1	5.3/7.4	5.3/7.4	6.3/9.2
			Super Hi	m^3/min.	6.1/8.9	6.1/8.9	6.5/9.1	6.5/9.1	7.2/11.2
		Out	Rated	m^3/min.	34.3	34.3	35.2	35.2	49.0
Heating	Capacity	Rated		kW	3.4	3.4	4.0	4.0	6.0
		Max.		kW	5.1	5.1	6.2	6.2	7.9
		Min.		kW	0.9	0.9	0.9	0.9	0.9
	Total Input	Rated		kW	0.835	0.835	1.100	1.100	1.860
	COP				4.07	4.07	3.64	3.64	3.23
		EEL RANK			A	A	A	A	C
	SPL	In	Low	dB(A)	22/22	22/22	25/25	25/25	32/32
		1Fan/2Fan	Mid	dB(A)	27/27	27/27	28/28	28/28	35/35
			Hi	dB(A)	32/32	32/32	33/33	33/33	39/39
			Super Hi	dB(A)	37/37	37/37	38/38	38/38	44/44
		Out	Rated	dB(A)	46	46	48	48	55
	Air Volume	In	Low	m^3/min.	3.7/5.0	3.7/5.0	4.0/5.2	4.0/5.2	5.3/7.4
		1Fan/2Fan	Mid	m^3/min.	4.4/6.2	4.4/6.2	4.6/6.2	4.6/6.2	5.8/8.8
			Hi	m^3/min.	5.2/7.6	5.2/7.6	5.4/7.8	5.4/7.8	6.7/9.8
			Super Hi	m^3/min.	6.1/9.4	6.1/9.4	6.3/9.5	6.3/9.5	7.8/12.3
		Out	Rated	m^3/min.	33.8	33.8	33.2	33.2	49.0
Max. Running Current				A	8.8	8.8	9.7	9.7	17.0
Indoor Unit	Input	Rated		kW	0.025	0.025	0.025	0.025	0.025
	Max. Running Current			A	0.2	0.2	0.2	0.2	0.2
	Dimensions		Height	mm	600	600	600	600	600
			Width	mm	700	700	700	700	700
			Depth	mm	200	200	200	200	200
	Weight			kg	14	14	14	14	14
	Breaker Size			A	—	—	—	—	—
Outdoor Unit	Dimensions		Height	mm	550	550	550	550	850
			Width	mm	800	800	800	800	840
			Depth	mm	285	285	285	285	330
	Weight			kg	30	30	33	33	53
	Max. Running Current			A	8.6	8.6	9.5	9.5	16.8
	Breaker Size			A	10	10	10	10	20
Ext. Piping	Diameter	Liquid		mm	6.35	6.35	6.35	6.35	6.35
		Gas		mm	9.52	9.52	9.52	9.52	12.7
	Max. lengh	Out-In	Total	m	20	20	20	20	30
	Max. Height	Out-In	Below Indoor	m	12	12	12	12	15
			Above Indoor	m	12	12	12	12	15
Guranteed Operation Range	Out	Cooling	Upper Limit	°C	+46	+46	+46	+46	+43
			Lower Limit	°C	-10	-10	-10	-10	-10
		Heating	Upper Limit	°C	+24	+24	+24	+24	+24
			Lower Limit	°C	-10	-20	-10	-20	-10

C.2.2 OUTLINES AND DIMENSIONS

C.2.2.1 Indoor Unit

MFZ-KA25VA MFZ-KA35VA MFZ-KA50VA

INDOOR UNIT

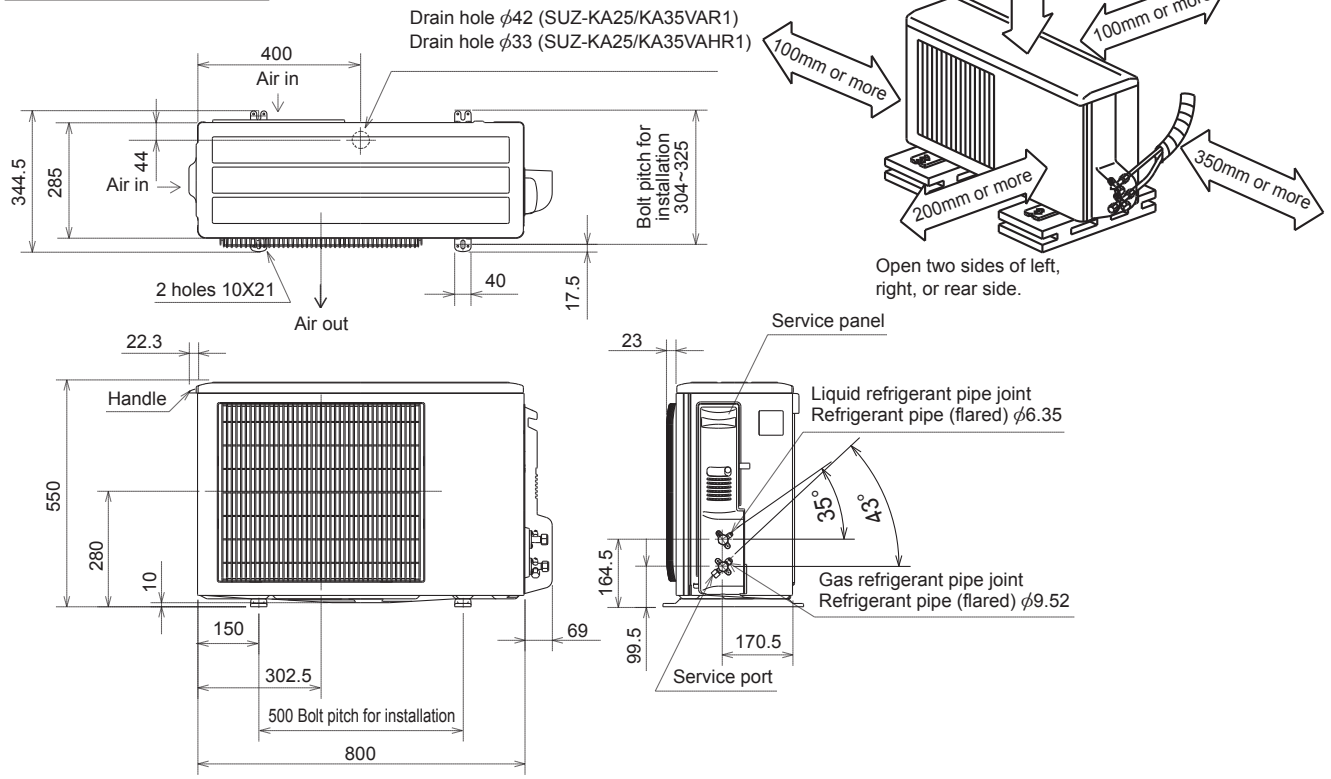


Wireless remote controller

C.2.2.2 Outdoor Unit

SUZ-KA25VAR1.TH SUZ-KA25VAHR1.TH
SUZ-KA35VAR1.TH SUZ-KA35VAHR1.TH

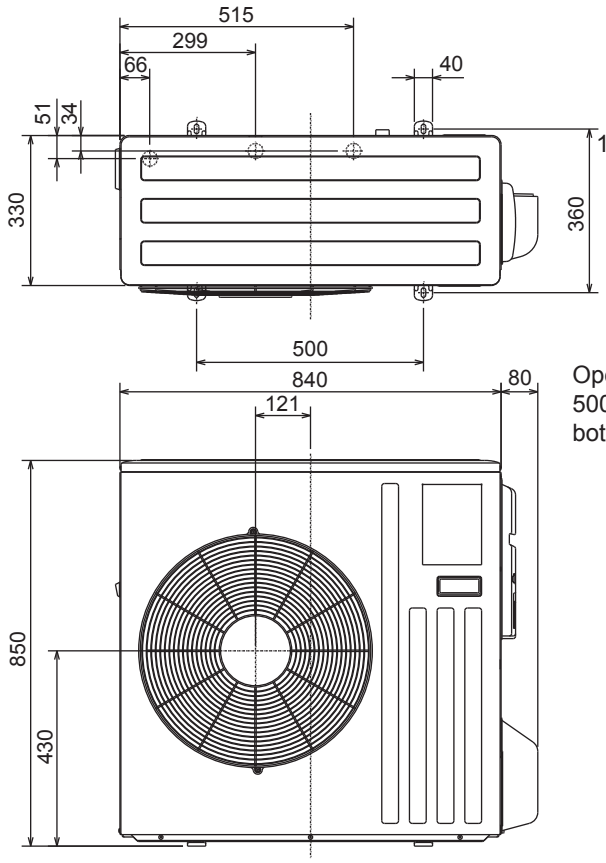
OUTDOOR UNIT



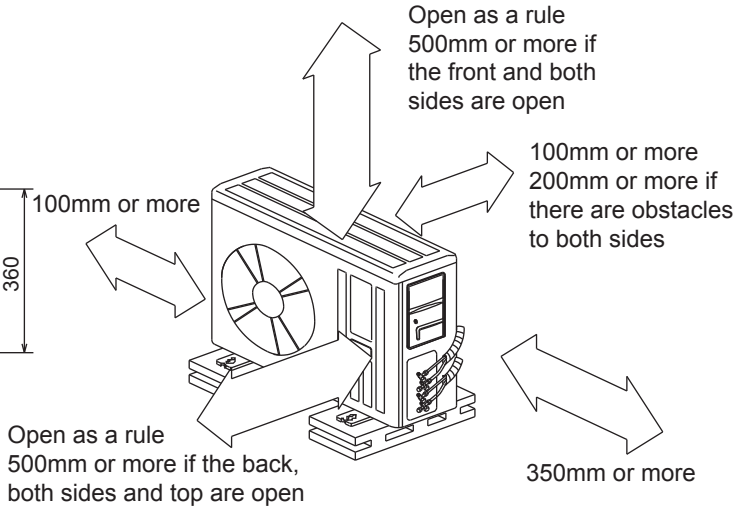
SUZ-KA50VAR2.TH

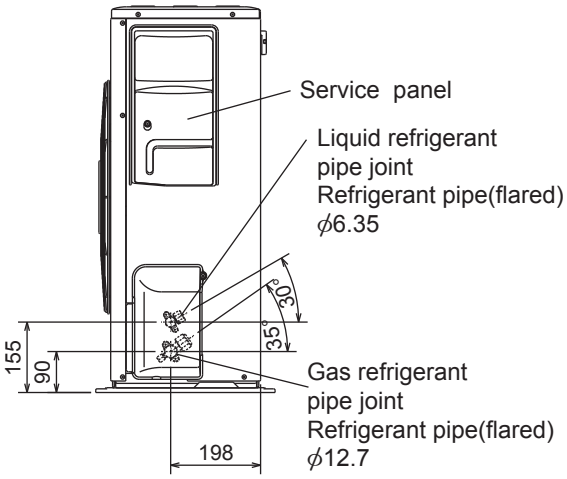
Unit: mm

OUTDOOR UNIT



REQUIRED SPACE



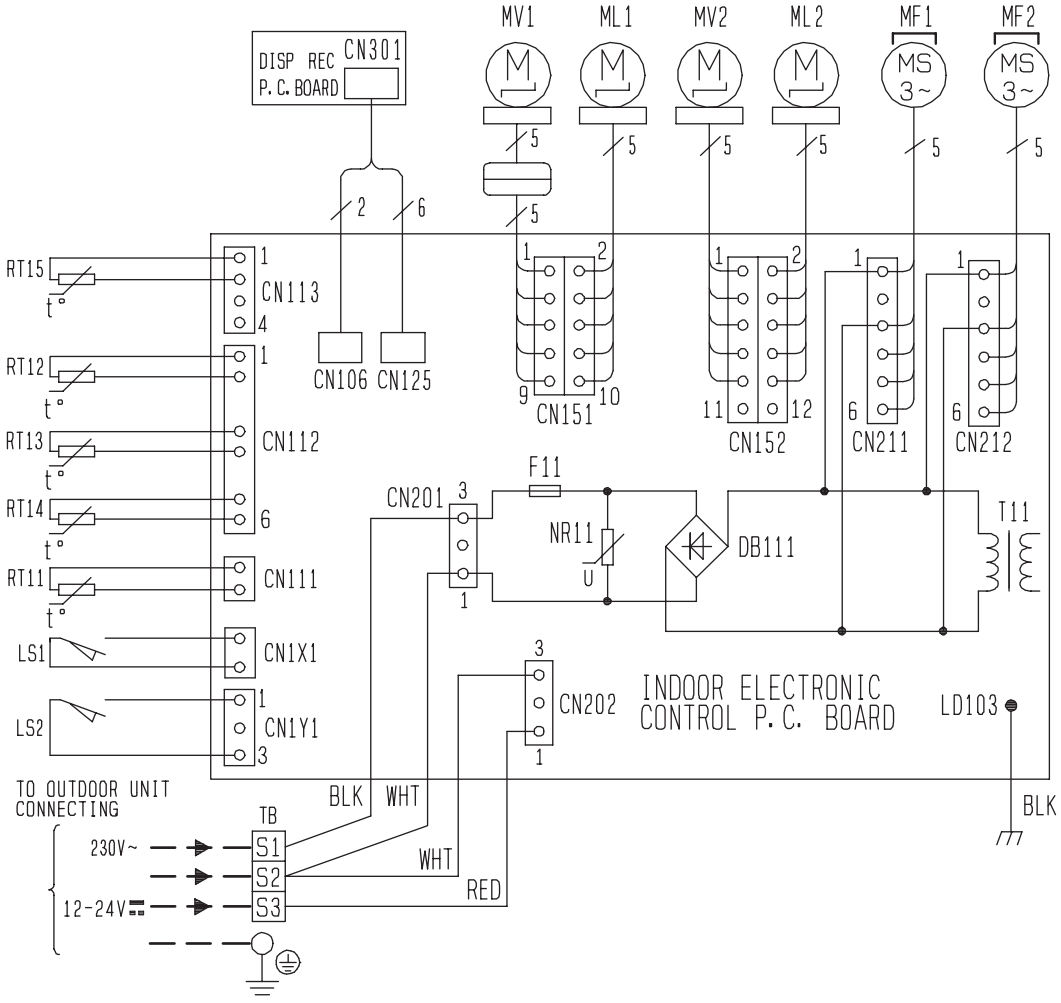


C.2.3 WIRING DIAGRAM

C.2.3.1 Indoor Unit

MFZ-KA25VA
MFZ-KA35VA
MFZ-KA50VA

INDOOR UNIT

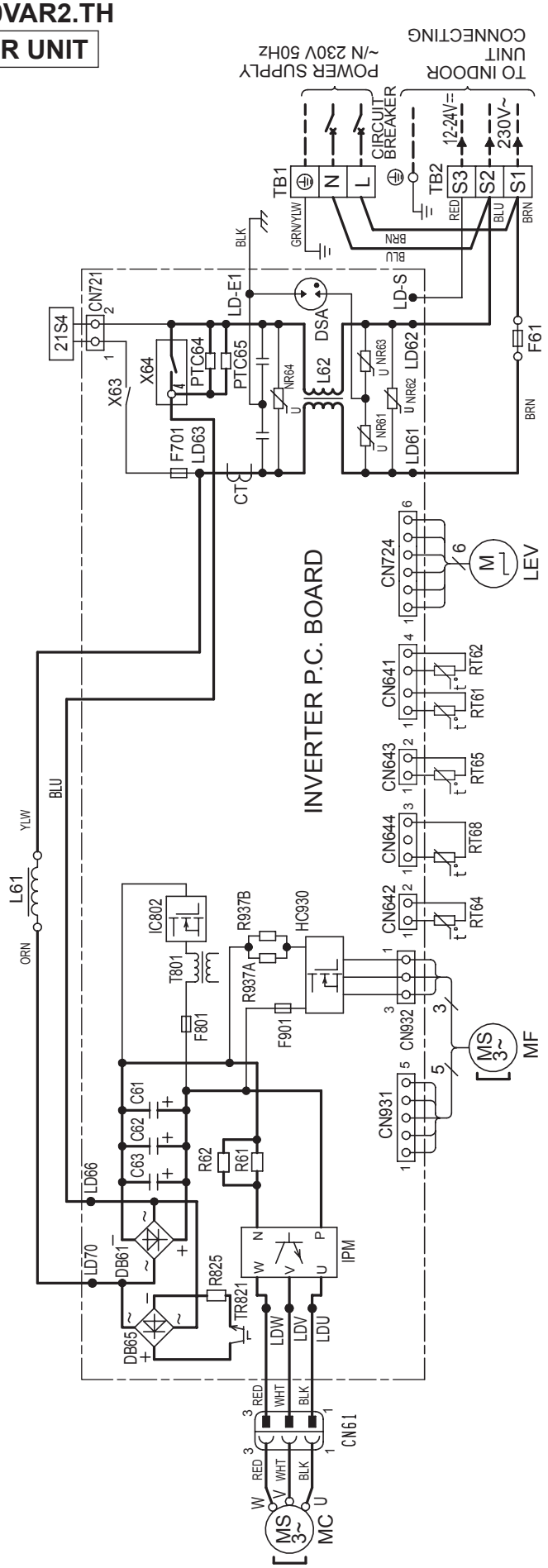


SYMBOL	NAME	SYMBOL	NAME
MF1	UPPER FAN MOTOR	RT11	ROOM TEMP. THERMISTOR
MF2	LOWER FAN MOTOR	RT12	COIL TEMP. THERMISTOR (MAIN1)
MV1	HORIZONTAL VANE MOTOR	RT13	COIL TEMP. THERMISTOR (SUB)
MV2	DAMPER MOTOR	RT14	COIL TEMP. THERMISTOR (MAIN2)
ML1	DAMPER LOCK MOTOR (RIGHT)	RT15	COIL TEMP. THERMISTOR (MAIN3)
ML2	DAMPER LOCK MOTOR (LEFT)	DB111	DIODE STACK
LS1	DAMPER LIMIT SWITCH (OPEN)	NR11	VARISTOR
LS2	DAMPER LIMIT SWITCH (CLOSE)	T11	TRANSFORMER
F11	FUSE (T3.15AL250V)		

NOTES:
1. About the outdoor side electric wiring refer to the outdoor unit electric wiring diagram for servicing.
2. Use copper conductors only. (For field wiring)
3. Symbols below indicate.
   : Terminal block
   : Connector

SUZ-KA50VAR2.TH

OUTDOOR UNIT



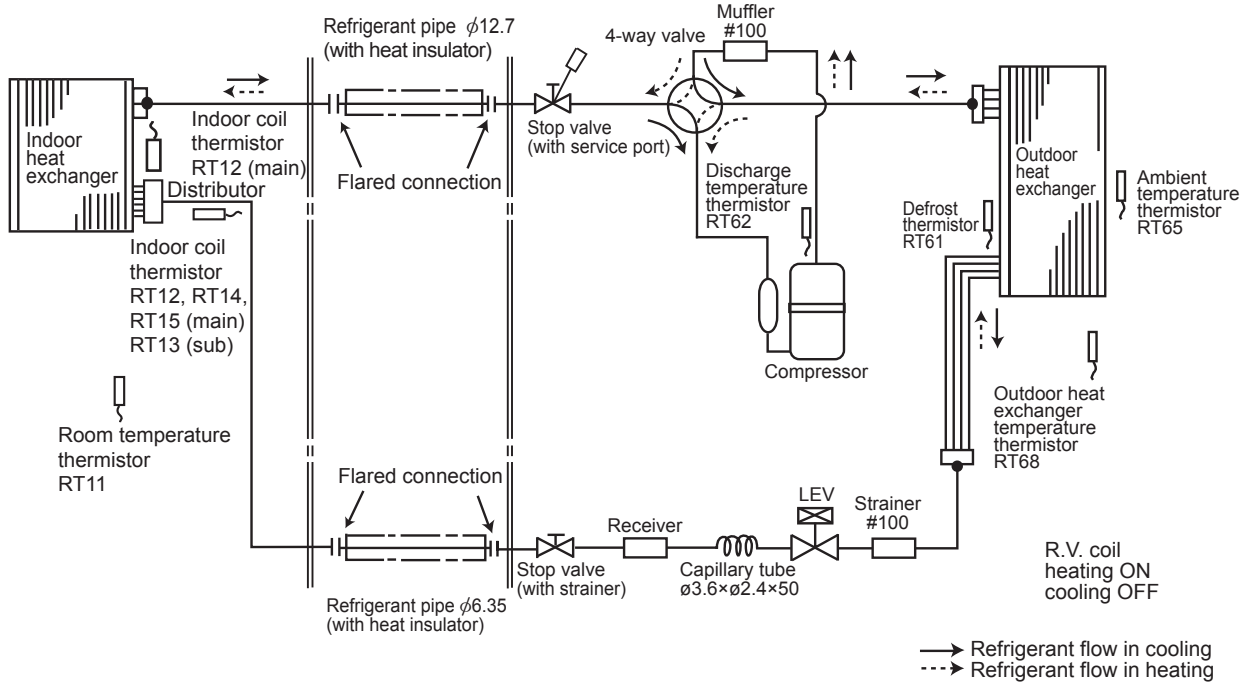
NOTES: 1. About the indoor side electric wiring, refer to the indoor unit electric wiring diagram for servicing.
2. Use copper conductors only (for field wiring).
3. Symbols below indicate.
□□□ :Terminal block

SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CT	CURRENT TRANSFORMER	LEV	EXPANSION VALVE COIL	R61,R62	CURRENT-DETECTING RESISTOR
C61,62,63	SMOOTHING CAPACITOR	MC	COMPRESSOR	R825	CURRENT-DETECTING RESISTOR
DB61,DB65	DIODE MODULE	MF	FAN MOTOR	R937A, B	CURRENT-DETECTING RESISTOR
DSA	SURGE ABSORBER	PTC64,PTC65	CIRCUIT PROTECTION	TB1,TB52	TERMINAL BLOCK
F61	FUSE (T20AL 250V)	RT61	DEFROST THERMISTOR	TR821	SWITCHING POWER TRANSISTOR
F701,F801,F901	FUSE (T3.15AL 250V)	RT62	DISCHARGE TEMP. THERMISTOR	T801	TRANSFORMER
HC930,IPM	INTELLIGENT POWER MODULE	RT64	FIN TEMP. THERMISTOR	X63,X64	RELAY
IC802	INTELLIGENT POWER DEVICE	RT65	AMBIENT TEMP. THERMISTOR	21S4	REVERSING VALVE COIL
L61	REACTOR	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR		
L62	REACTOR				

Unit: mm

MFZ-KA50VA
INDOOR UNIT

SUZ-KA50VAR2.TH
OUTDOOR UNIT



C.2.5 PERFORMANCE CURVES

The standard data contained in these specifications apply only to the operation of the air conditioner under normal condition. Operating conditions vary according to the areas where these units are installed. The following information has been provided to clarify the operating characteristics of the air conditioner under the conditions indicated by the performance curve.

(1) GUARANTEED VOLTAGE

(2) AIR FLOW

Air flow should be set at MAX.

(3) MAIN READINGS

COOLING

(1) Indoor intake air wet-bulb temperature: W.B. ˚C
(2) Indoor outlet air wet-bulb temperature: W.B. ˚C
(3) Outdoor intake air dry-bulb temperature: D.B. ˚C
(4) Total input: W

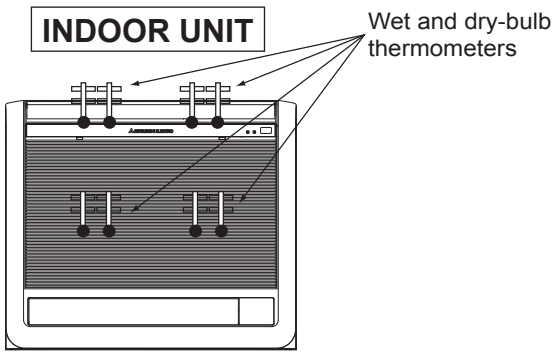
HEATING

(1) Indoor intake air dry-bulb temperature: D.B. ˚C
(2) Indoor outlet air dry-bulb temperature: D.B. ˚C
(3) Outdoor intake air wet-bulb temperature: W.B. ˚C
(4) Total input: W

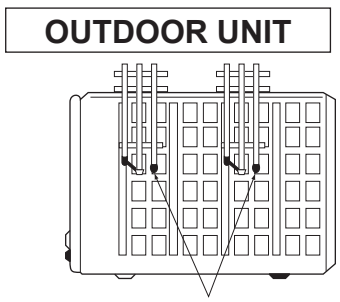
Indoor air wet/dry-bulb temperature difference on the side of the following chart shows the difference between the indoor intake air wet/dry-bulb temperature and the indoor outlet air wet/dry-bulb temperature for your reference at service.

How to measure the indoor air wet-bulb/dry-bulb temperature difference

1. Attach at least 2 sets of wet-and-dry-bulb thermometers to the indoor air inlet as shown in the figure, and at least 2 sets of wet-and-dry-bulb thermometers to the indoor air outlet. The thermometers must be attached to the position where air speed is high.
2. Attach at least 2 sets of wet-and-dry-bulb thermometers to the outdoor air inlet. Cover the thermometers to prevent direct rays of the sun.
3. Check that the air filter is cleaned.
4. Open windows and doors of the room.
5. Press the EMERGENCY OPERATION switch once to start the COOL (HEAT) MODE.
6. When system stabilizes after more than 15 minutes, measure temperature and take an average temperature.
7. 10 minutes later, measure temperature again and check that the temperature does not change.

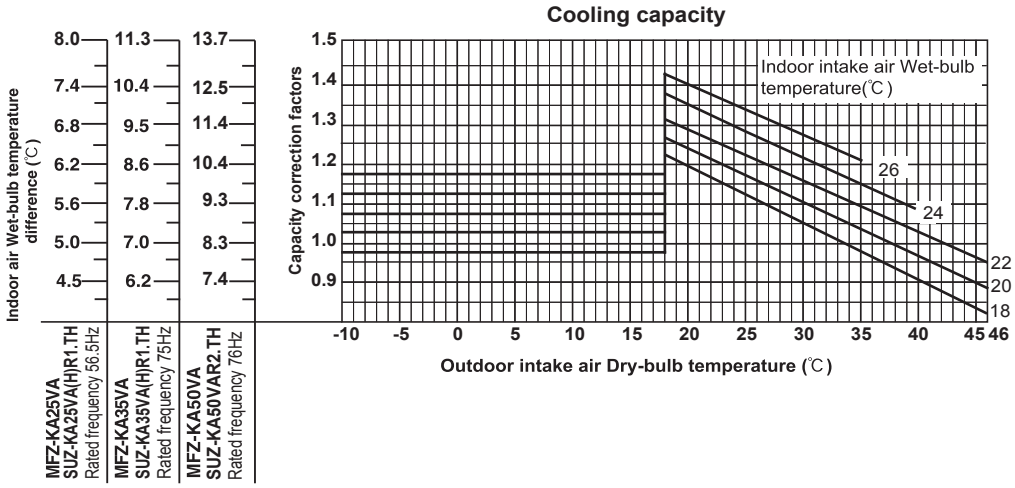


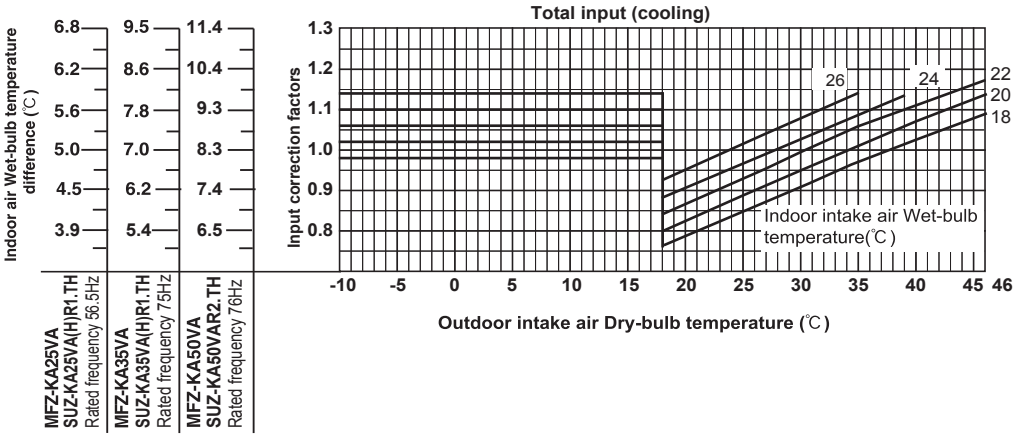
FRONT VIEW



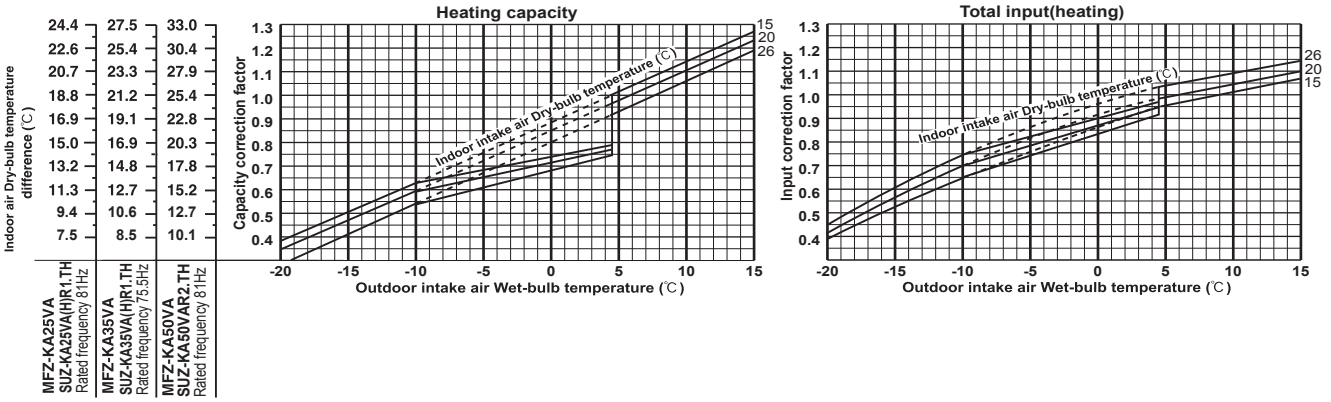
BACK VIEW

C.2.5.1 Inverter Heat Pump
CAPACITY AND THE INPUT CURVES



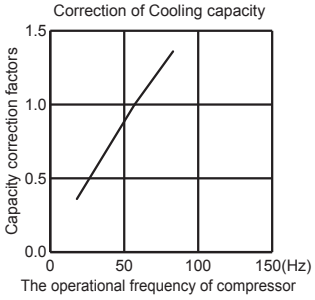


Lower limit of guaranteed operating range in heating
SUZ-KA25/35/50VA: -10℃
SUZ-KA25/35VAH : -20℃

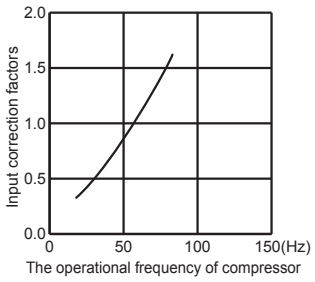

Heating capacity
Indoor air Dry-bulb temperature difference (℃)
24.4 27.5 33.0
22.6 25.4 30.4
20.7 23.3 27.9
18.8 21.2 25.4
16.9 19.1 22.8
15.0 16.9 20.3
13.2 14.8 17.8
11.3 12.7 15.2
9.4 10.6 12.7
7.5 8.5 10.1
Capacity correction factor
1.3 1.2 1.1 1.0 0.9 0.8 0.7 0.6 0.5 0.4
Indoor intake air Dry-bulb temperature (℃)
15
20
26
-20 -15 -10 -5 0 5 10 15
Outdoor intake air Wet-bulb temperature (℃)
Total input(heating)
Input correction factor
1.3 1.2 1.1 1.0 0.9 0.8 0.7 0.6 0.5 0.4
Indoor intake air Dry-bulb temperature (℃)
26
20
15
-20 -15 -10 -5 0 5 10 15
Outdoor intake air Wet-bulb temperature (℃)
MFZ-KA25VA SUZ-KA25VA(H)R1.TH Rated frequency 81Hz
MFZ-KA35VA SUZ-KA35VA(H)R1.TH Rated frequency 75.5Hz
MFZ-KA50VA SUZ-KA50VAR2.TH Rated frequency 81Hz

NOTE: The above curves are for the heating operation without any frost.

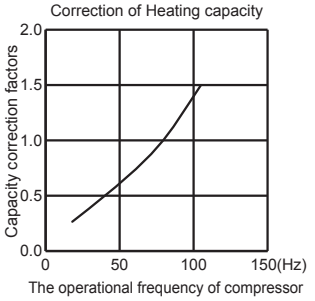
SUZ-KA25VA(H)R1.TH
Correction of Cooling capacity



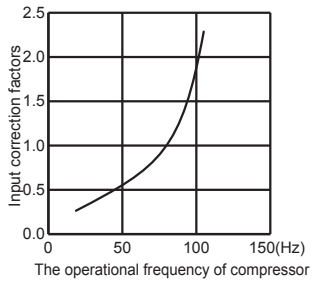
SUZ-KA25VA(H)R1.TH
Correction of Cooling total input



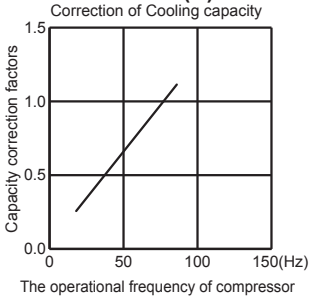
SUZ-KA25VA(H)R1.TH
Correction of Heating capacity



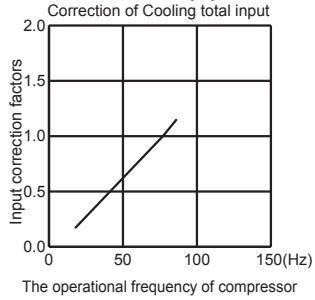
SUZ-KA25VA(H)R1.TH
Correction of Heating total input



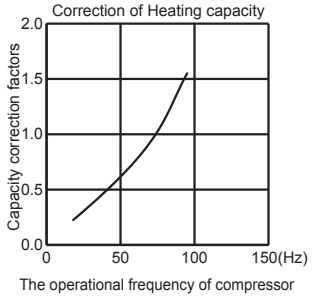
SUZ-KA35VA(H)R1.TH
Correction of Cooling capacity



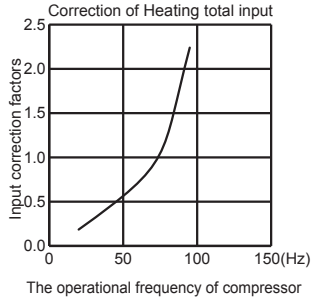
SUZ-KA35VA(H)R1.TH
Correction of Cooling total input



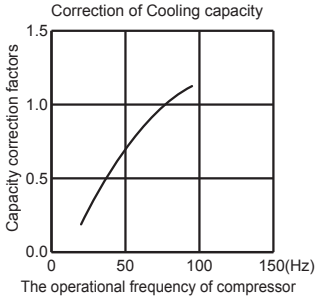
SUZ-KA35VA(H)R1.TH
Correction of Heating capacity



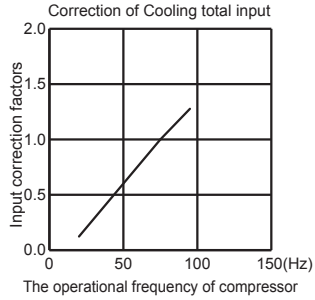
SUZ-KA35VA(H)R1.TH
Correction of Heating total input



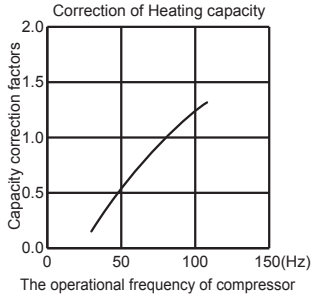
SUZ-KA50VAR2.TH
Correction of Cooling capacity



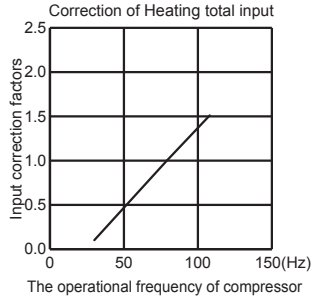
SUZ-KA50VAR2.TH
Correction of Cooling total input



SUZ-KA50VAR2.TH
Correction of Heating capacity



SUZ-KA50VAR2.TH
Correction of Heating total input



OUTDOOR LOW PRESSURE AND OUTDOOR UNIT CURRENT

<How to operate fixed-frequency operation (Test run operation)>
1. Press the EMERGENCY OPERATION switch or the Test button to COOL or HEAT mode.
2. Test run operation starts and continue to operate for 30 minutes.
3. Compressor starts at rated frequency in COOL mode or 58 Hz in HEAT mode.
4. Indoor fan operates at High speed.
5. After 30 minutes, test run operation finishes and EMERGENCY OPERATION starts.
6. To cancel test run operation (EMERGENCY OPERATION), press the EMERGENCY OPERATION switch or the ON/OFF button on remote controller.

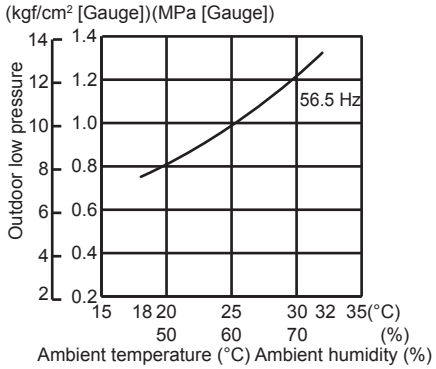
NOTE: The unit of pressure has been changed to MPa on the international system of units (SI unit system).
The conversion factor is: **1(MPa [Gauge]) =10.2(kgf/cm^2 [Gauge])**

OUTDOOR LOW PRESSURE AND OUTDOOR UNIT CURRENT
COOLING operation

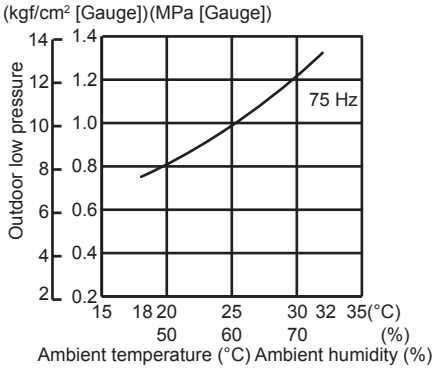
① Both indoor and outdoor unit are under the same temperature/humidity condition.
② Air flow: High speed
③ Operational frequency : 56.5 Hz (SUZ-KA25VA(H)R1.TH)
75 Hz (SUZ-KA35VA(H)R1.TH)
76 Hz (SUZ-KA50VAR2.TH)

Dry-bulb temperature	Relative humidity (%)
20	50
25	60
30	70

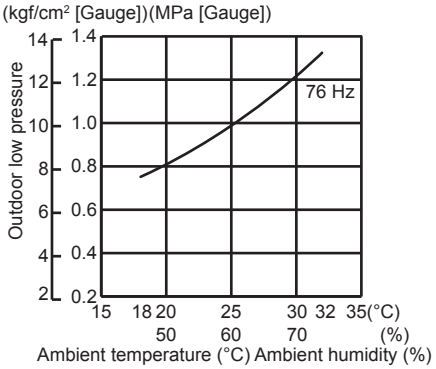
SUZ-KA25VA(H)R1.TH



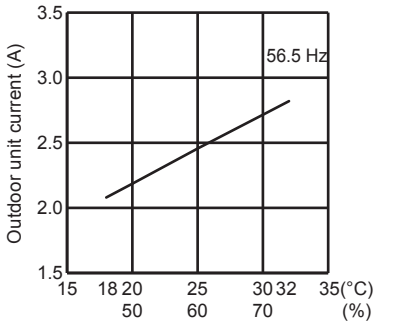
SUZ-KA35VA(H)R1.TH



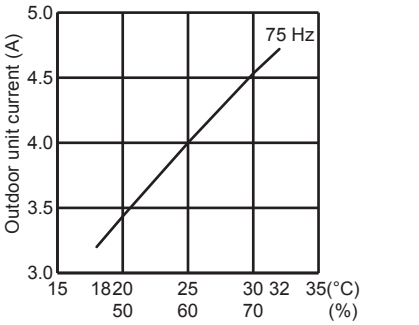
SUZ-KA50VAR2.TH



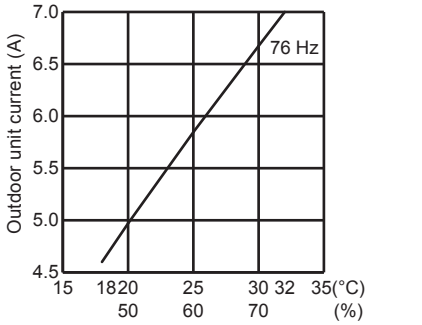
SUZ-KA25VA(H)R1.TH



SUZ-KA35VA(H)R1.TH



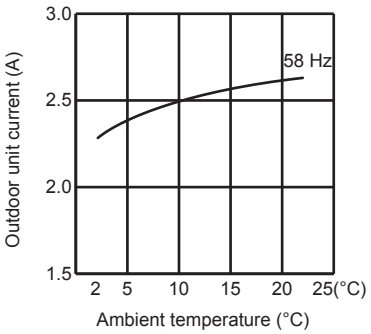
SUZ-KA50VAR2.TH



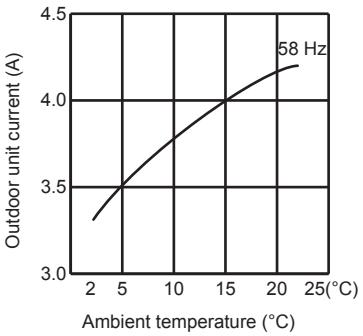
HEATING operation

Condition indoor: Dry bulb temperature 20.0 °C
Wet bulb temperature 14.5 °C
Condition outdoor: Dry bulb temperature 2,7,15,20.0 °C
Wet bulb temperature 1,6,12,14.5 °C

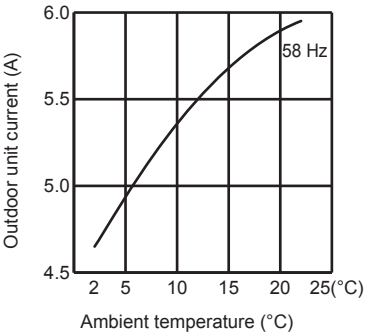
SUZ-KA25VA(H)R1.TH



SUZ-KA35VA(H)R1.TH



SUZ-KA50VAR2.TH



PERFORMANCE DATA
COOLING operation
MFZ-KA50VA/SUZ-KA50VAR2.TH Rated frequency 76Hz
CAPACITY : 4.8(kW) SHF : 0.63 INPUT : 1550(W)

INDOOR DB(°C)	INDOOR WB(°C)	OUTDOOR DB(°C) 21 Q	SHC	SHF	INPUT	25 Q	SHC	SHF	INPUT	27 Q	SHC	SHF	INPUT	30 Q	SHC	SHF	INPUT
21	18	5.64	2.54	0.45	1240	5.40	2.43	0.45	1302	5.18	2.33	0.45	1364	4.99	2.25	0.45	1426
21	20	5.88	1.94	0.33	1302	5.64	1.86	0.33	1380	5.47	1.81	0.33	1411	5.28	1.74	0.33	1473
22	18	5.64	2.76	0.49	1240	5.40	2.65	0.49	1302	5.18	2.54	0.49	1364	4.99	2.45	0.49	1426
22	20	5.88	2.18	0.37	1302	5.64	2.09	0.37	1380	5.47	2.02	0.37	1411	5.28	1.95	0.37	1473
22	22	6.12	1.53	0.25	1349	5.90	1.48	0.25	1434	5.76	1.44	0.25	1473	5.52	1.38	0.25	1535
23	18	5.64	2.99	0.53	1240	5.40	2.86	0.53	1302	5.18	2.75	0.53	1364	4.99	2.65	0.53	1426
23	20	5.88	2.41	0.41	1302	5.64	2.31	0.41	1380	5.47	2.24	0.41	1411	5.28	2.16	0.41	1473
23	22	6.12	1.77	0.29	1349	5.90	1.71	0.29	1434	5.76	1.67	0.29	1473	5.52	1.60	0.29	1535
24	18	5.64	3.21	0.57	1240	5.40	3.08	0.57	1302	5.18	2.95	0.57	1364	4.99	2.85	0.57	1426
24	20	5.88	2.65	0.45	1302	5.64	2.54	0.45	1380	5.47	2.46	0.45	1411	5.28	2.38	0.45	1473
24	22	6.12	2.02	0.33	1349	5.90	1.95	0.33	1434	5.76	1.90	0.33	1473	5.52	1.82	0.33	1535
24	24	6.43	1.35	0.21	1411	6.19	1.30	0.21	1488	6.05	1.27	0.21	1535	5.86	1.23	0.21	1612
25	18	5.64	3.44	0.61	1240	5.40	3.29	0.61	1302	5.18	3.16	0.61	1364	4.99	3.05	0.61	1426
25	20	5.88	2.88	0.49	1302	5.64	2.76	0.49	1380	5.47	2.68	0.49	1411	5.28	2.59	0.49	1473
25	22	6.12	2.26	0.37	1349	5.90	2.18	0.37	1434	5.76	2.13	0.37	1473	5.52	2.04	0.37	1535
25	24	6.43	1.61	0.25	1411	6.19	1.55	0.25	1488	6.05	1.51	0.25	1535	5.86	1.46	0.25	1612
26	18	5.64	3.67	0.65	1240	5.40	3.51	0.65	1302	5.18	3.37	0.65	1364	4.99	3.24	0.65	1426
26	20	5.88	3.12	0.53	1302	5.64	2.99	0.53	1380	5.47	2.90	0.53	1411	5.28	2.80	0.53	1473
26	22	6.12	2.51	0.41	1349	5.90	2.42	0.41	1434	5.76	2.36	0.41	1473	5.52	2.26	0.41	1535
26	24	6.43	1.87	0.29	1411	6.19	1.80	0.29	1488	6.05	1.75	0.29	1535	5.86	1.70	0.29	1612
26	26	6.62	1.13	0.17	1488	6.43	1.09	0.17	1566	6.34	1.08	0.17	1612	6.14	1.04	0.17	1659
27	18	5.64	3.89	0.69	1240	5.40	3.73	0.69	1302	5.18	3.58	0.69	1364	4.99	3.44	0.69	1426
27	20	5.88	3.35	0.57	1302	5.64	3.21	0.57	1380	5.47	3.12	0.57	1411	5.28	3.01	0.57	1473
27	22	6.12	2.75	0.45	1349	5.90	2.66	0.45	1434	5.76	2.59	0.45	1473	5.52	2.48	0.45	1535
27	24	6.43	2.12	0.33	1411	6.19	2.04	0.33	1488	6.05	2.00	0.33	1535	5.86	1.93	0.33	1612
27	26	6.62	1.39	0.21	1488	6.43	1.35	0.21	1566	6.34	1.33	0.21	1612	6.14	1.29	0.21	1659
28	18	5.64	4.12	0.73	1240	5.40	3.94	0.73	1302	5.18	3.78	0.73	1364	4.99	3.64	0.73	1426
28	20	5.88	3.59	0.61	1302	5.64	3.44	0.61	1380	5.47	3.34	0.61	1411	5.28	3.22	0.61	1473
28	22	6.12	3.00	0.49	1349	5.90	2.89	0.49	1434	5.76	2.82	0.49	1473	5.52	2.70	0.49	1535
28	24	6.43	2.38	0.37	1411	6.19	2.29	0.37	1488	6.05	2.24	0.37	1535	5.86	2.17	0.37	1612
28	26	6.62	1.66	0.25	1488	6.43	1.61	0.25	1566	6.34	1.58	0.25	1612	6.14	1.54	0.25	1659
29	18	5.64	4.34	0.77	1240	5.40	4.16	0.77	1302	5.18	3.99	0.77	1364	4.99	3.84	0.77	1426
29	20	5.88	3.82	0.65	1302	5.64	3.67	0.65	1380	5.47	3.56	0.65	1411	5.28	3.43	0.65	1473
29	22	6.12	3.24	0.53	1349	5.90	3.13	0.53	1434	5.76	3.05	0.53	1473	5.52	2.93	0.53	1535
29	24	6.43	2.64	0.41	1411	6.19	2.54	0.41	1488	6.05	2.48	0.41	1535	5.86	2.40	0.41	1612
29	26	6.62	1.92	0.29	1488	6.43	1.87	0.29	1566	6.34	1.84	0.29	1612	6.14	1.78	0.29	1659
30	18	5.64	4.57	0.81	1240	5.40	4.37	0.81	1302	5.18	4.20	0.81	1364	4.99	4.04	0.81	1426
30	20	5.88	4.06	0.69	1302	5.64	3.89	0.69	1380	5.47	3.78	0.69	1411	5.28	3.64	0.69	1473
30	22	6.12	3.49	0.57	1349	5.90	3.37	0.57	1434	5.76	3.28	0.57	1473	5.52	3.15	0.57	1535
30	24	6.43	2.89	0.45	1411	6.19	2.79	0.45	1488	6.05	2.72	0.45	1535	5.86	2.64	0.45	1612
30	26	6.62	2.19	0.33	1488	6.43	2.12	0.33	1566	6.34	2.09	0.33	1612	6.14	2.03	0.33	1659
31	18	5.64	4.79	0.85	1240	5.40	4.59	0.85	1302	5.18	4.41	0.85	1364	4.99	4.24	0.85	1426
31	20	5.88	4.29	0.73	1302	5.64	4.12	0.73	1380	5.47	3.99	0.73	1411	5.28	3.85	0.73	1473
31	22	6.12	3.73	0.61	1349	5.90	3.60	0.61	1434	5.76	3.51	0.61	1473	5.52	3.37	0.61	1535
31	24	6.43	3.15	0.49	1411	6.19	3.03	0.49	1488	6.05	2.96	0.49	1535	5.86	2.87	0.49	1612
31	26	6.62	2.45	0.37	1488	6.43	2.38	0.37	1566	6.34	2.34	0.37	1612	6.14	2.27	0.37	1659
32	18	5.64	5.02	0.89	1240	5.40	4.81	0.89	1302	5.18	4.61	0.89	1364	4.99	4.44	0.89	1426
32	20	5.88	4.53	0.77	1302	5.64	4.34	0.77	1380	5.47	4.21	0.77	1411	5.28	4.07	0.77	1473
32	22	6.12	3.98	0.65	1349	5.90	3.84	0.65	1434	5.76	3.74	0.65	1473	5.52	3.59	0.65	1535
32	24	6.43	3.41	0.53	1411	6.19	3.28	0.53	1488	6.05	3.21	0.53	1535	5.86	3.10	0.53	1612
32	26	6.62	2.72	0.41	1488	6.43	2.64	0.41	1566	6.34	2.60	0.41	1612	6.14	2.52	0.41	1659

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA
COOLING operation
MFZ-KA50VA/SUZ-KA50VAR2.TH Rated frequency 76Hz
CAPACITY : 4.8(kW) SHF : 0.63 INPUT : 1550(W)

		OUTDOOR DB(°C)											
INDOOR DB (°C)	INDOOR WB (°C)	35				40				46			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	4.70	2.12	0.45	1519	4.32	1.94	0.45	1612	3.98	1.79	0.45	1674
21	20	4.94	1.63	0.33	1581	4.61	1.52	0.33	1659	4.27	1.41	0.33	1752
22	18	4.70	2.30	0.49	1519	4.32	2.12	0.49	1612	3.98	1.95	0.49	1674
22	20	4.94	1.83	0.37	1581	4.61	1.70	0.37	1659	4.27	1.58	0.37	1752
22	22	5.23	1.31	0.25	1643	4.90	1.22	0.25	1736	4.56	1.14	0.25	1798
23	18	4.70	2.49	0.53	1519	4.32	2.29	0.53	1612	3.98	2.11	0.53	1674
23	20	4.94	2.03	0.41	1581	4.61	1.89	0.41	1659	4.27	1.75	0.41	1752
23	22	5.23	1.52	0.29	1643	4.90	1.42	0.29	1736	4.56	1.32	0.29	1798
24	18	4.70	2.68	0.57	1519	4.32	2.46	0.57	1612	3.98	2.27	0.57	1674
24	20	4.94	2.22	0.45	1581	4.61	2.07	0.45	1659	4.27	1.92	0.45	1752
24	22	5.23	1.73	0.33	1643	4.90	1.62	0.33	1736	4.56	1.50	0.33	1798
24	24	5.52	1.16	0.21	1705	5.18	1.09	0.21	1783	4.90	1.03	0.21	1860
25	18	4.70	2.87	0.61	1519	4.32	2.64	0.61	1612	3.98	2.43	0.61	1674
25	20	4.94	2.42	0.49	1581	4.61	2.26	0.49	1659	4.27	2.09	0.49	1752
25	22	5.23	1.94	0.37	1643	4.90	1.81	0.37	1736	4.56	1.69	0.37	1798
25	24	5.52	1.38	0.25	1705	5.18	1.30	0.25	1783	4.90	1.22	0.25	1860
26	18	4.70	3.06	0.65	1519	4.32	2.81	0.65	1612	3.98	2.59	0.65	1674
26	20	4.94	2.62	0.53	1581	4.61	2.44	0.53	1659	4.27	2.26	0.53	1752
26	22	5.23	2.15	0.41	1643	4.90	2.01	0.41	1736	4.56	1.87	0.41	1798
26	24	5.52	1.60	0.29	1705	5.18	1.50	0.29	1783	4.90	1.42	0.29	1860
26	26	5.81	0.99	0.17	1767	5.47	0.93	0.17	1845	5.14	0.87	0.17	1922
27	18	4.70	3.25	0.69	1519	4.32	2.98	0.69	1612	3.98	2.75	0.69	1674
27	20	4.94	2.82	0.57	1581	4.61	2.63	0.57	1659	4.27	2.44	0.57	1752
27	22	5.23	2.35	0.45	1643	4.90	2.20	0.45	1736	4.56	2.05	0.45	1798
27	24	5.52	1.82	0.33	1705	5.18	1.71	0.33	1783	4.90	1.62	0.33	1860
27	26	5.81	1.22	0.21	1767	5.47	1.15	0.21	1845	5.14	1.08	0.21	1922
28	18	4.70	3.43	0.73	1519	4.32	3.15	0.73	1612	3.98	2.91	0.73	1674
28	20	4.94	3.02	0.61	1581	4.61	2.81	0.61	1659	4.27	2.61	0.61	1752
28	22	5.23	2.56	0.49	1643	4.90	2.40	0.49	1736	4.56	2.23	0.49	1798
28	24	5.52	2.04	0.37	1705	5.18	1.92	0.37	1783	4.90	1.81	0.37	1860
28	26	5.81	1.45	0.25	1767	5.47	1.37	0.25	1845	5.14	1.28	0.25	1922
29	18	4.70	3.62	0.77	1519	4.32	3.33	0.77	1612	3.98	3.07	0.77	1674
29	20	4.94	3.21	0.65	1581	4.61	3.00	0.65	1659	4.27	2.78	0.65	1752
29	22	5.23	2.77	0.53	1643	4.90	2.59	0.53	1736	4.56	2.42	0.53	1798
29	24	5.52	2.26	0.41	1705	5.18	2.13	0.41	1783	4.90	2.01	0.41	1860
29	26	5.81	1.68	0.29	1767	5.47	1.59	0.29	1845	5.14	1.49	0.29	1922
30	18	4.70	3.81	0.81	1519	4.32	3.50	0.81	1612	3.98	3.23	0.81	1674
30	20	4.94	3.41	0.69	1581	4.61	3.18	0.69	1659	4.27	2.95	0.69	1752
30	22	5.23	2.98	0.57	1643	4.90	2.79	0.57	1736	4.56	2.60	0.57	1798
30	24	5.52	2.48	0.45	1705	5.18	2.33	0.45	1783	4.90	2.20	0.45	1860
30	26	5.81	1.92	0.33	1767	5.47	1.81	0.33	1845	5.14	1.69	0.33	1922
31	18	4.70	4.00	0.85	1519	4.32	3.67	0.85	1612	3.98	3.39	0.85	1674
31	20	4.94	3.61	0.73	1581	4.61	3.36	0.73	1659	4.27	3.12	0.73	1752
31	22	5.23	3.19	0.61	1643	4.90	2.99	0.61	1736	4.56	2.78	0.61	1798
31	24	5.52	2.70	0.49	1705	5.18	2.54	0.49	1783	4.90	2.40	0.49	1860
31	26	5.81	2.15	0.37	1767	5.47	2.02	0.37	1845	5.14	1.90	0.37	1922
32	18	4.70	4.19	0.89	1519	4.32	3.84	0.89	1612	3.98	3.55	0.89	1674
32	20	4.94	3.81	0.77	1581	4.61	3.55	0.77	1659	4.27	3.29	0.77	1752
32	22	5.23	3.40	0.65	1643	4.90	3.18	0.65	1736	4.56	2.96	0.65	1798
32	24	5.52	2.93	0.53	1705	5.18	2.75	0.53	1783	4.90	2.59	0.53	1860
32	26	5.81	2.38	0.41	1767	5.47	2.24	0.41	1845	5.14	2.11	0.41	1922

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA

HEATING operation

MFZ-KA25VA/SUZ-KA25VA(H)R1.TH Rated frequency 81Hz

CAPACITY : 3.4(kW) INPUT : 835(W)

INDOOR DB(°C)	OUTDOOR WB(°C)													
	-10		-5		0		5		10		15		20	
	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT
15	2.14	534	2.58	651	3.03	735	3.47	793	3.91	843	4.32	868	4.76	885
21	2.04	585	2.45	693	2.89	768	3.30	827	3.74	868	4.15	893	4.57	927
26	1.84	626	2.28	735	2.69	810	3.13	868	3.57	910	3.98	935	4.42	960

MFZ-KA35VA/SUZ-KA35VA(H)R1.TH Rated frequency 75.5Hz

CAPACITY : 4.0(kW) INPUT : 1100(W)

INDOOR DB(°C)	OUTDOOR WB(°C)													
	-10		-5		0		5		10		15		20	
	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT
15	2.52	715	3.04	858	3.56	968	4.08	1045	4.60	1111	5.08	1144	5.60	1166
21	2.40	770	2.88	913	3.40	1012	3.88	1089	4.40	1144	4.88	1177	5.38	1221
26	2.16	825	2.68	968	3.16	1067	3.68	1144	4.20	1199	4.68	1232	5.20	1265

MFZ-KA50VA/SUZ-KA50VAR2.TH Rated frequency 81Hz

CAPACITY : 6.0(kW) INPUT : 1860(W)

INDOOR DB(°C)	OUTDOOR WB(°C)													
	-10		-5		0		5		10		15		20	
	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT
15	3.78	1209	4.56	1451	5.34	1637	6.12	1767	6.90	1879	7.62	1934	8.40	1972
21	3.60	1302	4.32	1544	5.10	1711	5.82	1841	6.60	1934	7.32	1990	8.07	2065
26	3.24	1395	4.02	1637	4.74	1804	5.52	1934	6.30	2027	7.02	2083	7.80	2139

NOTE : Q:Total capacity (kW) INPUT:Total power input (W) DB: Dry-bulb temperature WB: Wet-bulb temperature

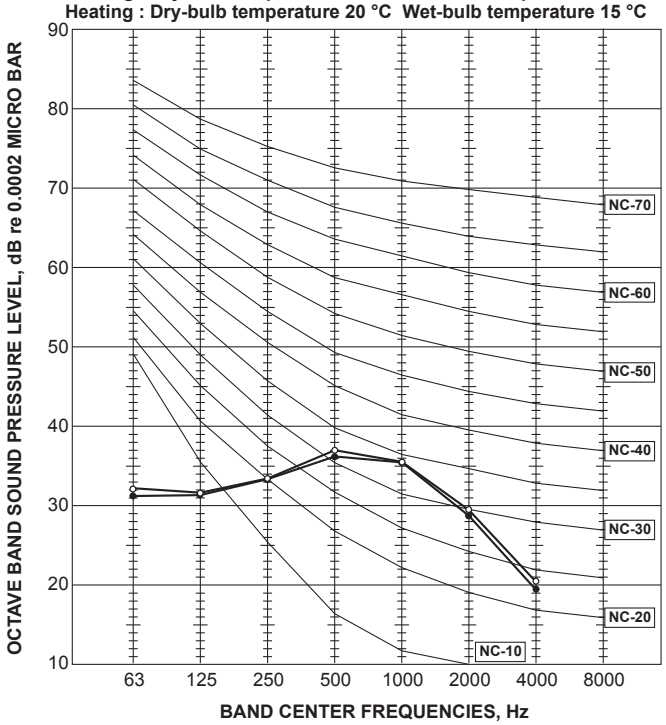
C.2.7 NOISE CRITERIA CURVES

C.2.7.1 Inverter Heat Pump

MFZ-KA25VA

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
Super High	COOLING	37	●—●
	HEATING	37	○—○

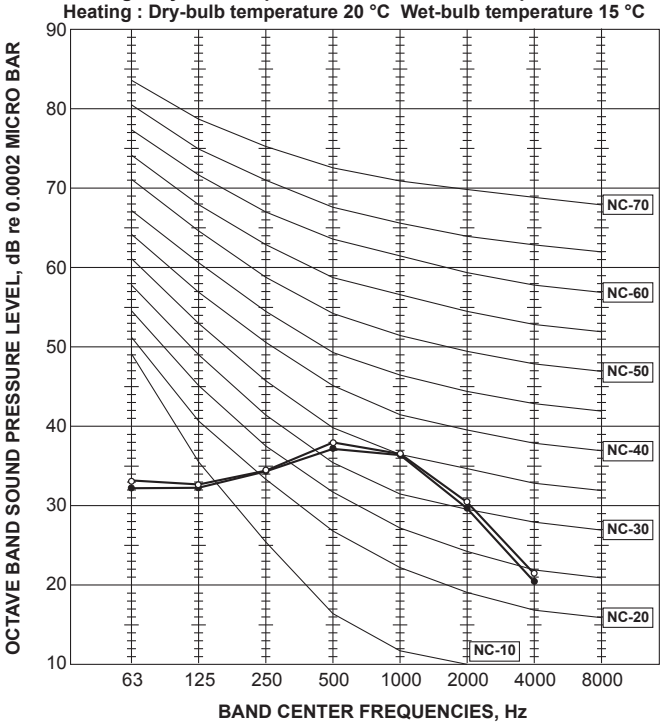
Test conditions,
Cooling : Dry-bulb temperature 27 °C Wet-bulb temperature 19 °C
Heating : Dry-bulb temperature 20 °C Wet-bulb temperature 15 °C



MFZ-KA35VA

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
Super High	COOLING	38	●—●
	HEATING	38	○—○

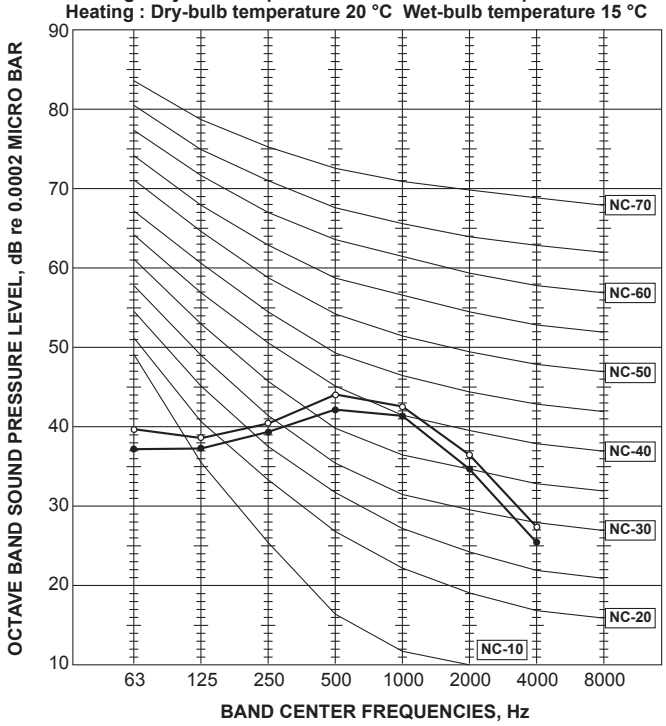
Test conditions,
Cooling : Dry-bulb temperature 27 °C Wet-bulb temperature 19 °C
Heating : Dry-bulb temperature 20 °C Wet-bulb temperature 15 °C

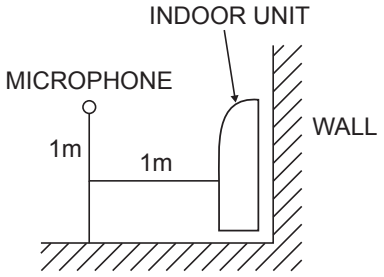


MFZ-KA50VA

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
Super High	COOLING	43	●—●
	HEATING	44	○—○

Test conditions,
Cooling : Dry-bulb temperature 27 °C Wet-bulb temperature 19 °C
Heating : Dry-bulb temperature 20 °C Wet-bulb temperature 15 °C





C.2.8 TROUBLESHOOTING

C.2.8.1 Inverter Heat Pump

MFZ-KA25VA MFZ-KA35VA MFZ-KA50VA

Failure mode recall function

Outline of the function

This air conditioner can memorize the abnormal condition which has occurred once.

Even though OPERATION INDICATOR lamp indication listed on the troubleshooting check table disappears, the memorized failure details can be recalled.

This mode is very useful when the unit needs to be repaired for the abnormality which does not recur.

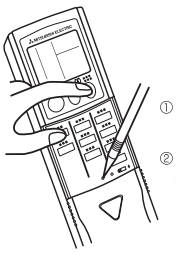
1. Flow chart of failure mode recall function for the indoor/outdoor unit

Operational procedure

The cause of abnormality cannot be found because the abnormality does not recur.

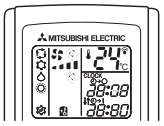
Setting up the failure mode recall function

Turn ON the power supply.
① While pressing both OPERATION SELECT button and TOO COOL button on the remote controller at the same time, press RESET button.
② First, release RESET button.
And release the other two buttons after all LCD except the set temperature in operation display section of the remote controller is displayed after 3 seconds.



① While pressing both OPERATION SELECT button and TOO COOL button on the remote controller at the same time, press RESET button.
② First, release RESET button.
And release the other two buttons after all LCD except the set temperature in operation display section of the remote controller is displayed after 3 seconds.

Press OPERATE/STOP(ON/OFF) button of the remote controller (the set temperature is displayed) with the remote controller headed towards the indoor unit. ※1



※1. Regardless of normal or abnormal, a short beep is emitted once as the signal is received.

Does the left lamp of OPERATION INDICATOR lamp on the indoor unit blink at the interval of 0.5 seconds?
Blinks: Either indoor or outdoor unit is abnormal.
Beep are emitted at the same timing as the blinking of the left lamp of OPERATION INDICATOR lamp. ※2

No (OFF) → Indoor unit is normal.
But the outdoor unit might be abnormal because there are some abnormalities that are not memorized in the indoor unit.
Confirm if outdoor unit is abnormal according to the flow chart of the detailed outdoor unit failure mode recall function.

Yes (Blinks)

Judgment of indoor/outdoor abnormality

Before blinking, does the left lamp of OPERATION INDICATOR lamp stay ON for 3 seconds?
Stays ON for 3 seconds (without beep):
The outdoor unit is abnormal.

Yes → The outdoor unit is abnormal.
Check the blinking pattern, and confirm the abnormal point.
Make sure to check at least two consecutive blinking cycles. ※3

No → The indoor unit is abnormal.
Check the blinking pattern, and confirm the abnormal point with the indoor unit failure mode table.
Make sure to check at least two consecutive blinking cycles. ※2

Releasing the failure mode recall function

Release the failure mode recall function by the following procedures.
Turn OFF the power supply and turn it ON again.
Press RESET button of the remote controller.

As for outdoor unit, refer to outdoor unit service manual.

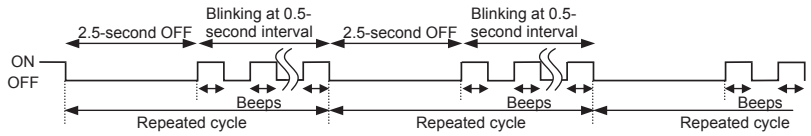
Repair the defective parts.

Deleting the abnormal memorized condition

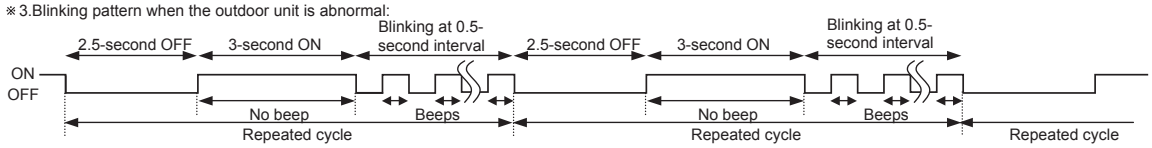
① After repairing the unit, recall the failure mode again according to "Setting up the failure mode recall function" mentioned above.
② Press OPERATE/STOP(ON/OFF) button of the remote controller (the set temperature is displayed) with the remote controller headed towards the indoor unit. ※1
③ Press EMERGENCY OPERATION switch so that the memorized abnormal condition is deleted.
④ Release the failure mode recall function according to "Releasing the failure mode recall function" mentioned above.

Note1.Make sure to release the failure mode recall function once it is set up, otherwise the unit cannot operate properly.
2.If the abnormal condition is not deleted from the memory, the last abnormal condition is kept memorized.

※2. Blinking pattern when the indoor unit is abnormal:



※3.Blinking pattern when the outdoor unit is abnormal:



MFZ-KA25VA MFZ-KA35VA MFZ-KA50VA

2. Indoor unit failure mode table

NOTE: Blinking patterns of this mode differs from the ones of Troubleshooting check table.

Left lamp of OPERATION INDICATOR lamp	Right lamp of OPERATION INDICATOR lamp	Abnormal point (Failure mode)	Check point
Not lighted	Not lighted	Normal	–
1-time flash every 0.5-second	Not lighted	Room temperature thermistor	When the room temperature thermistor short or open circuit is detected every 8 seconds during operation.
2-time flash 2.5-second OFF	Not lighted	Indoor coil thermistor (Main 1, 2 and sub)	When the indoor coil thermistor short or open circuit is detected every 8 seconds during operation.
3-time flash 2.5-second OFF	Not lighted	Serial signal error	When the serial signal from the outdoor unit is not received for a maximum of 6 minutes.
11-time flash 2.5-second OFF	Not lighted	Indoor fan motor (Upper)	When the rotational frequency feedback signal is not emitted during 12-second the indoor fan operation.
	1-time flash every 0.5-second	Indoor fan motor (Lower)	
12-time flash 2.5-second OFF	Not lighted	Indoor control system	When it cannot be read properly data in the nonvolatile memory of the indoor electronic control P.C. board.
13-time flash 2.5-second OFF	Not lighted	Indoor coil thermistor (Main 3)	When the indoor coil thermistor short or open circuit is detected every 8 seconds during operation.
14-time flash 2.5-second OFF	Not lighted	Damper	When the damper is not located at the designated position.

MFZ-KA25VA MFZ-KA35VA MFZ-KA50VA

Troubleshooting Check Table

OPERATION INDICATOR

Lighted
Blinking
Not lighted

· Flashing of OPERATION INDICATOR lamp (left-hand side lamp) indicates abnormalities.

NOTE: Before taking measures, make sure that the symptom reappears for accurate troubleshooting.

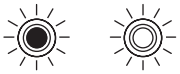
Self check table

No.	Abnormal point	Operation indicator lamp	Symptom	Check point
1	Mis-Wiring or serial signal	Left lamp flashes. 0.5-second ON 0.5-second OFF	Indoor unit and outdoor unit do not operate.	When the serial signal from the outdoor unit is not received for a maximum of 6 minutes.
2	Outdoor control system	Left lamp lights up	Outdoor unit does not operate.	When it cannot properly read data in the nonvolatile memory of the inverter P.C. board or of the outdoor electronic control P.C. board.
3	Indoor coil thermistor Room tempera-ture thermistor	Left lamp flashes. 2-time flash 2.5-second OFF	Indoor unit and outdoor unit do not operate.	When the indoor coil or the room temperature thermistor is shorts or opens circuit.
4	Indoor fan motor	Left lamp flashes. 3-time flash 2.5-second OFF	Indoor unit and outdoor unit do not operate.	When the rotational frequency feedback signal is not emitted during the indoor fan operation.
5	Indoor control system	Left lamp flashes. 4-time flash 2.5-second OFF	Indoor unit and outdoor unit do not operate.	When it cannot properly read data in the nonvolatile memory of the indoor electronic control P.C. board.
6	Outdoor power system	Left lamp flashes. 5-time flash 2.5-second OFF	Indoor unit and outdoor unit do not operate.	The compressor stops 3 times consecutively for over current protection or start-up failure protection within 1 minute after start-up.
7	Outdoor thermistors	Left lamp flashes. 6-time flash 2.5-second OFF	Indoor unit and outdoor unit do not operate.	When the outdoor thermistors short or open circuit during the compressor operation.
8	Outdoor control system	Left lamp flashes. 7-time flash 2.5-second OFF	Indoor unit and outdoor unit do not operate.	When it cannot properly read data in the nonvolatile memory of the inverter P.C. board or of the outdoor electronic control P.C. board.
9	Other abnormality	Left lamp flashes. 14-time flash 2.5-second OFF	Indoor unit and outdoor unit do not operate.	An abnormality other than above mentioned is detected.
10	Indoor damper	Left lamp flashes. 15-time flash 2.5-second OFF	Indoor unit and outdoor unit do not operate.	When the damper is not located at the designated position.

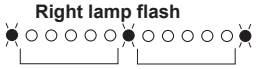
NOTE: When the indoor unit has started operation and the above failures are detected (the first detection after the power ON), the indoor electronic control P.C. board turns OFF the indoor fan motor with OPERATION INDICATOR lamp flashing.

MFZ-KA25VA MFZ-KA35VA MFZ-KA50VA

OPERATION INDICATOR



· Flashing of OPERATION INDICATOR lamp (right-hand side lamp) indicates abnormality.
· OPERATION INDICATOR lamp (left-hand side lamp) is lighted.

No.	Abnormal point	Operation indicator lamp	Symptom	Check point
1	**MXZ type** Operation mode setting	**Right lamp flash**  2.5-second OFF	Outdoor unit operates but indoor unit does not operate.	When the operation mode of the each indoor unit is differently set to COOL(includes DRY) and HEAT at the same time, the operation mode of the indoor unit that has operated at first has the priority.

NOTE: When the indoor unit has started operation and the above failures are detected (the first detection after the power ON), the indoor electronic control P.C. board turns OFF the indoor fan motor with OPERATION INDICATOR lamp flashing.

C.2.9 INSTALLATION PROCEDURE

C.2.9.1 Inverter Heat Pump

MFZ-KA25VA MFZ-KA35VA MFZ-KA50VA
SUZ-KA25VAR1.TH SUZ-KA25VAHR1.TH
SUZ-KA35VAR1.TH SUZ-KA35VAHR1.TH SUZ-KA50VAR2.TH

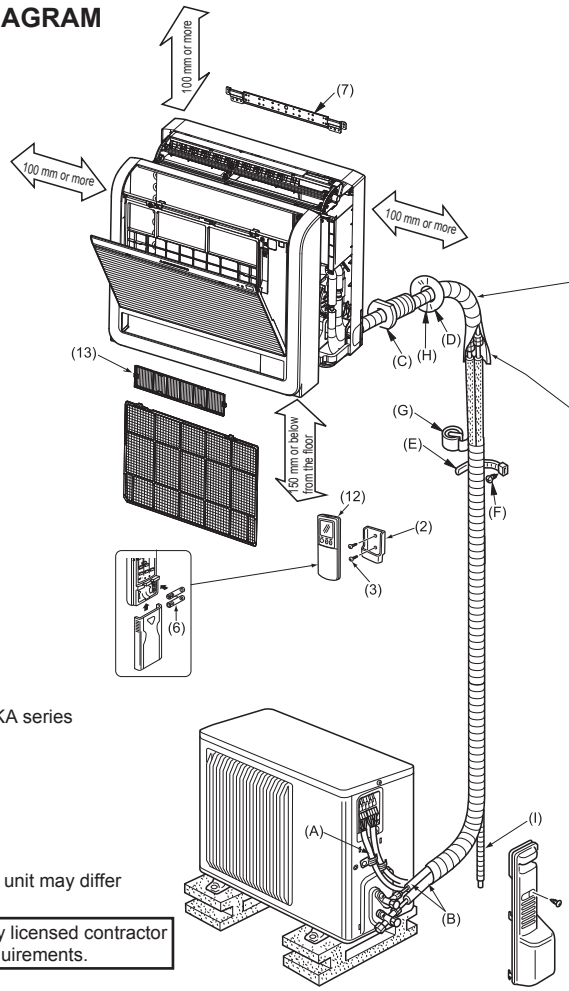
INSTALLATION DIAGRAM AND ACCESSORIES

SPECIFICATIONS

Model	Power supply *1		Wire specifications *2	Pipe size (thickness *3, *4)		Pipe length and height difference *5, *6		
	Rated Voltage	Frequency	Indoor/outdoor connecting wire	Gas	Liquid	Max. pipe length	Max. height difference	Insulation thickness *7, *8
MFZ-KA25/35VA	230 V	50 Hz	4-core 1.5 mm^2	ø9.52 mm (0.8 mm)	ø6.35 mm (0.8 mm)	20 m	12 m	8 mm
MFZ-KA50VA				ø12.7 mm (1.0 mm)		30 m	15 m	

*1 Connect to the power switch which has a gap of 3 mm or more when open to interrupt the source power phase. (When the power switch is shut off, it must interrupt all phases.)
*2 Use wires in conformity with design 60245 IEC 57.
*3 Never use pipes with thickness less than specified. The pressure resistance will be insufficient.
*4 Use a copper pipe or a copper-alloy seamless pipe.
*5 Be careful not to crush or bend the pipe during pipe bending.
*6 Refrigerant pipe bending radius must be 100 mm or more.
*7 Insulation material : Heat resisting foam plastic 0.045 specific gravity
*8 Be sure to use the insulation of specified thickness. Excessive thickness may cause incorrect installation of the indoor unit and insufficient thickness may cause dew drippage.

INSTALLATION DIAGRAM

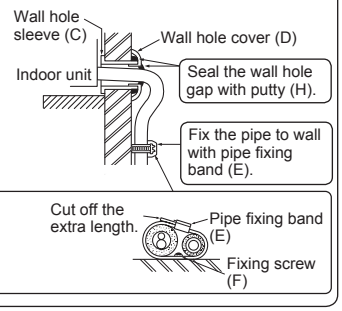


SUZ-KA series

Apprearance of the outdoor unit may differ from some models.

Units should be installed by licensed contractor according to local code requirements.

Be sure to use wall hole sleeve (C) to prevent indoor/outdoor connecting wire (A) from contacting metal parts in the wall and to prevent damage by rodents in case the wall is hollow.


Wall hole sleeve (C)
Wall hole cover (D)
Indoor unit
Seal the wall hole gap with putty (H).
Fix the pipe to wall with pipe fixing band (E).
Cut off the extra length.
Pipe fixing band (E)
Fixing screw (F)

After the leak test, apply insulating material tightly so that there is no gap.

When the piping is to be attached to a wall containing metals (tin plated) or metal netting, use a chemically treated wooden piece 20 mm or thicker between the wall and the piping or wrap 7 to 8 turns of insulation vinyl tape around the piping.
To use existing piping, perform COOL operation for 30 minutes and pump down before removing the old air conditioner. Remake flare according to the dimension for new refrigerant.

Drain piping for outdoor unit
Install the unit horizontally.
Do not use drain socket in cold regions. Drain may freeze and make the fan stop.
The outdoor unit produces condensate during the heating operation. Select the installation place to ensure to prevent the outdoor unit and/or the grounds from being wet by drain water or damaged by frozen drain water.

ACCESSORIES

Check the following parts before installation.

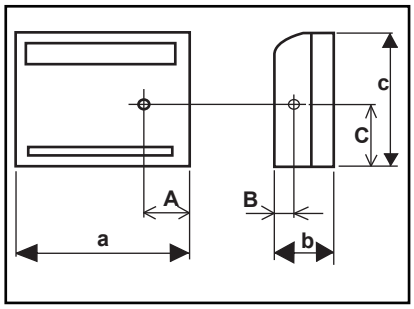
(1)	Drain hose	1	(11)	Felt tape (For left or left-rear piping)	1
(2)	Remote controller holder	1	(12)	Wireless remote controller	1
(3)	Fixing screw for (2) 3.5 × 16 mm (Black)	2	(13)	Air cleaning filter	1
(4)	Pipe cover	1			
(5)	Band	2			
(6)	Battery (AAA) for (12)	2			
(7)	Indoor unit mounting bracket	1			
(8)	Fixing screw for (7) 4 × 25 mm	5			
(9)	Wood screw for indoor unit fixation	4			
(10)	Washer of (9)	4			

PARTS TO BE PROVIDED AT YOUR SITE

(A)	Indoor/outdoor unit connecting wire*	1
(B)	Extension pipe	1
(C)	Wall hole sleeve	1
(D)	Wall hole cover	1
(E)	Pipe fixing band	2 to 5
(F)	Fixing screw for (E) 4 × 20 mm	2 to 5
(G)	Piping tape	1
(H)	Putty	1
(I)	Drain hose (or soft PVC hose, 15 mm inner dia. or hard PVC pipe VP16)	1 or 2
(J)	Refrigeration oil	1

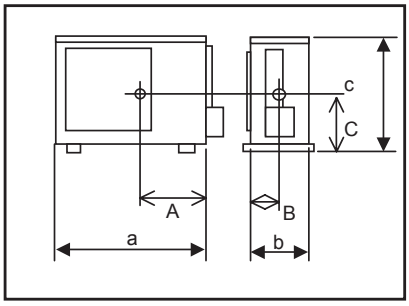
*** Note:**
Place indoor/outdoor unit connecting wire (A) and power supply cord at least 1 m away from the TV antenna wire.

C.2.11 CENTER OF GRAVITY POSITION



Unit: mm

Indoor model	A	B	C	a	b	c
MFZ-KA25VA MFZ-KA35VA MFZ-KA50VA	305	85	330	700	200	600



Unit: mm

Outdoor unit	A	B	C	a	b	c
SUZ-KA25VAR1 SUZ-KA25VAHR1 SUZ-KA35VAR1 SUZ-KA35VAHR1	280	140	240	800	285	550
SUZ-KA50VAR2.TH	300	150	340	840	330	850

Optional Parts List <Indoor>

Option part / Indoor unit			Filter																			i-see sensor corner panel	Shutter plate	Multi-functional casement	Duct flange for fresh air intake		Space panel	Quick clean kit
			Air cleaning filter		Platinum catalyst deodrizing filter	Anti-allergy enzyme filter				Anti-allergen eletric enzyme filter	Catechin air filter		Oil mist filter element	High efficiency filter element				Fileter Box											
			MAC-1300 FT	MAC-1700 FT	MAC-307 FT-E	MAC-2310 FT	MAC-415 FT-E	MAC-408 FT-E	MAC-171 FT-E	MAC-417FT-E	MAC-3003 CF	MAC-3004 CF-E	PAC-SG38 KF-E	PAC-SH59 KF-E	PAC-SH88 KF-E	PAC-SH89 KF-E	PAC-SH90 KF-E	PAC-KE92 TB-E	PAC-KE93 TB-E	PAC-KE94 TB-E	PAC-KE95 TB-E	PAC-SA1 ME-E	PAC-SH51 SP-E	PAC-SH53 TM-E	PAC-SH65 OF-E	PAC-SF28 OF-E	PAC-SH48 AS-E	MAC-093 SS-E
Page			P.8	P.9	P.10	P.11	P.12	P.13	P.14	P.15	P.16	P.17	P.18	P.20	P.22	P.22	P.22	P.23	P.23	P.23	P.23	P.27	P.29	P.31	P.36	P.38	P.39	P.41
M series	Wall Mounted	MSZ-FD25VA(S)			●					●																		●
		MSZ-FD35VA(S)			●					●																		●
		MSZ-FD50VA(S)			●					●																		●
		MSZ-GE22VA						●																				●
		MSZ-GE25VA						●																				●
		MSZ-GE35VA						●																				●
		MSZ-GE42VA						●																				●
		MSZ-GE50VA						●																				●
		MSZ-GE60VA				●																						●
		MSZ-GE71VA				●																						●
		MSZ-HC25VA									●																	
		MSZ-HC35VA									●																	
		MSZ-HC35VAB									●																	
		MSZ-SF15VA																										●
		MSZ-SF20VA																										●
		MSC-GE20VB	●																									
		MSC-GE25VB	●																									
		MSC-GE35VB	●																									
		MSH-GE50VB		●																								
		MSH-GA60VB		●																								
		MSH-GD80VB		●																								
		MS-GE50VB		●																								
		MS-GA60VB		●																								
		MS-GD80VB		●																								
	Floor Standing	MFZ-KA25VA					●																					
		MFZ-KA35VA					●																					
		MFZ-KA50VA					●																					
	1-way Cassette	MLZ-KA25VA							●			●																
		MLZ-KA35VA							●			●																
		MLZ-KA50VA							●			●																
S series	4-way Cassette	SLZ-KA25VA																										
		SLZ-KA25VAL																										
		SLZ-KA35VA																										
		SLZ-KA35VAL																										
		SLZ-KA50VA																										
		SLZ-KA50VAL																										
	Ceiling Concealed	SEZ-KD25VA																										
		SEZ-KD25VAL																										
		SEZ-KD35VA																										
		SEZ-KD35VAL																										
		SEZ-KD50VA																										
		SEZ-KD50VAL																										
		SEZ-KD60VA																										
		SEZ-KD60VAL																										
		SEZ-KD71VA																										
		SEZ-KD71VAL																										
P series	4-way Cassette	PLA-RP35BA												●								●	●	●	●		●	
		PLA-RP50BA												●								●	●	●	●		●	
		PLA-RP60BA												●								●	●	●	●		●	
		PLA-RP71BA2												●								●	●	●	●		●	
		PLA-RP71BA												●								●	●	●	●		●	
		PLA-RP100BA3												●								●	●	●	●		●	
		PLA-RP100BA												●								●	●	●	●		●	
		PLA-RP125BA2												●								●	●	●	●		●	
		PLA-RP125BA												●								●	●	●	●		●	
		PLA-RP140BA2												●								●	●	●	●		●	
	Ceiling Concealed	PEAD-RP35JA(L)																●										
		PEAD-RP50JA(L)																●										
		PEAD-RP60JA(L)																	●									
		PEAD-RP71JA(L)																	●									
		PEAD-RP100JA(L)																		●								
		PEAD-RP125JA(L)																		●								
		PEAD-RP140JA(L)																			●							
		PEA-RP200GA																										
		PEA-RP250GA																										
		PEA-RP400GA																										
		PEA-RP500GA																										
	Wall Mounted	PKA-RP35HAL																										
		PKA-RP50HAL																										
		PKA-RP60KAL																										
		PKA-RP71KAL																										
		PKA-RP100KAL																										
	Ceiling Suspended	PCA-RP50KA													●													
		PCA-RP60KA														●												
		PCA-RP71KA														●												
		PCA-RP100KA															●											
		PCA-RP125KA															●											
		PCA-RP140KA															●											
		PCA-RP71HA											●													●		
		PCA-RP125HA											●													●		
	Floor Standing	PSA-RP71GA																										
		PSA-RP100GA																										
		PSA-RP125GA																										
		PSA-RP140GA																										

*1:In the case the outdoor unit is SUZ or MXZ, the indoor unit of P-series can be connected
*2:In the case the outdoor unit is SUZ or MXZ,the indoor unit of P-series can be connected (MAC-397IF-E required)
*3:MAC-397IF-E is required
*4:Unable to use with wireless remote controller
*5:2 pieces of interface is necessary for 1 indoor unit.

Optional Parts List <Outdoor>

Option part / Outdoor unit		Distribution pipe						Joint pipe									Filter dryer for liquid pipe		
		For twin use (50:50)		For triple use (33:33:33)	For quadruple use (25:25:25:25)	Flare connection type	Brazing type	Unit Φ6.35 --> Pipe Φ9.52	Unit Φ9.52 --> Pipe Φ12.7	Unit Φ12.7 --> Pipe Φ15.88	Unit Φ15.88 --> Pipe Φ19.05	Unit Φ9.52 --> Pipe Φ15.88	Unit Φ6.35 --> Pipe Φ9.52	Unit Φ9.52 --> Pipe Φ12.7	Unit Φ12.7 --> Pipe Φ9.52	Unit Φ12.7 --> Pipe Φ15.88	For pipe Φ6.35	For pipe Φ9.52	For pipe Φ12.7
		MSDD-50TR-E	MSDD-50WR-E	MSDT-111R-E	MSDF-1111R-E	MSDD-50AR-E	MSDD-50BR-E	PAC-SG72RJ-E	PAC-SG73RJ-E	PAC-SG74RJ-E	PAC-SG75RJ-E	PAC-SG76RJ-E	PAC-493PI	MAC-A454JP-E	MAC-A455JP-E	MAC-A456JP-E	PAC-SG81DR-E	PAC-SG82DR-E	PAC-SG85DR-E
Page		P.152	P.154	P.156	P.158	P.160	P.162	P.164	P.165	P.166	P.167	P.168	P.169	P.170	P.171	P.172	P.173	P.176	P.179
M series	F series	MUZ-FD25VA																	
		MUZ-FD25VABH																	
		MUZ-FD35VA																	
		MUZ-FD35VABH																	
		MUZ-FD50VA																	
		MUZ-FD50VABH																	
	G series	MUZ-GE25VA																	
		MUZ-GE25VAH																	
		MUZ-GE35VA																	
		MUZ-GE35VAH																	
		MUZ-GE42VA																	
		MUZ-GE42VAH																	
		MUZ-GE50VA																	
		MUZ-GE50VAH																	
		MUZ-GE60VA																	
		MUZ-GE71VA																	
	H series	MUZ-HC25VA																	
		MUZ-HC35VA																	
		MUZ-HC35VAB																	
	Fixed Speed (Heating&Cooling)	MUH-GA20VB																	
		MUH-GA25VB																	
		MUH-GA35VB																	
		MUH-GE50VB																	
		MUH-GA60VB																	
		MUH-GD80VB																	
	Fixed Speed (Cooling Only)	MU-GA20VB																	
		MU-GA25VB																	
		MU-GA35VB																	
		MU-GE50VB																	
		MU-GA60VB																	
		MU-GD80VB																	
S series		SUZ-KA25VA																	
		SUZ-KA25VAH																	
		SUZ-KA35VA							●										
		SUZ-KA35VAH							●										
		SUZ-KA50VA							●										
		SUZ-KA60VA							●										
		SUZ-KA71VA							●										
P series	ZUBADAN	PUHZ-HRP71VHA2	●															●	
		PUHZ-HRP100VHA2	●															●	
		PUHZ-HRP100YHA2	●															●	
		PUHZ-HRP125YHA2	●															●	
	Power Inverter	PUHZ-RP35VHA4							●										
		PUHZ-RP50VHA4							●										
		PUHZ-RP60VHA4								●		●						●	
		PUHZ-RP71VHA4	●							●		●						●	
		PUHZ-RP100VKA	●							●		●						●	
		PUHZ-RP100YKA	●							●		●						●	
		PUHZ-RP125VKA	●							●		●						●	
		PUHZ-RP125YKA	●							●		●						●	
		PUHZ-RP140VKA	●		●					●		●						●	
		PUHZ-RP140YKA	●		●					●		●						●	
		PUHZ-RP200YKA		●	●	●				●								●	
		PUHZ-RP250YKA		●	●	●					●								●
	Standard Inverter	PUHZ-P100VHA3	●															●	
		PUHZ-P100YHA	●															●	
		PUHZ-P125VHA3	●															●	
		PUHZ-P125YHA	●															●	
		PUHZ-P140VHA3	●		●													●	
		PUHZ-P140YHA	●		●													●	
		PUHZ-P200YHA3		●	●	●												●	
		PUHZ-P250YHA3		●	●	●													●
	Fixed Speed (Heating&Cooling)	PUH-P71VHA	●															●	
		PUH-P71YHA	●															●	
		PUH-P100VHA	●															●	
		PUH-P100YHA	●															●	
		PUH-P125YHA	●															●	
		PUH-P140YHA	●		●													●	
	Fixed Speed (Cooling Only)	PU-P71VHA	●															●	
		PU-P71YHA	●															●	
		PU-P100VHA	●															●	
		PU-P100YHA	●															●	
		PU-P125YHA	●															●	
		PU-P140YHA	●		●													●	
MXZ series		MXZ-2B30VA																	
		MXZ-2B40VA																	
		MXZ-2B52VA																	
		MXZ-3B54VA													●				
		MXZ-3B68VA											●		●				
		MXZ-4B71VA											●		●	●	●		
		MXZ-4B80VA											●	●	●	●	●		
		MXZ-5B100VA											●	●	●	●	●		
		MXZ-8A140VA					●	●					●	●	●		●		●